LINKING RHETORICAL SENSITIVITY
WITH THE ABILITY OF AN ATHLETIC TRAINING STUDENT
TO SUCCESSFULLY PERFORM A PATIENT MEDICAL INTERVIEW

By

Thomas K. Bertoncino

Submitted to the graduate degree program in the Department of Educational Leadership and Policy Studies and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Chairperson Lisa Wolf-Wendel

Tracy Russo

Susan Twombly

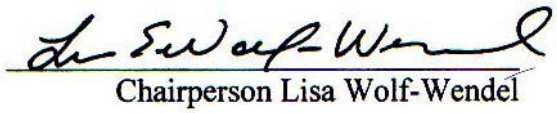
Dongbin Kim

David Carr

Date Defended: November 3, 2010

The Dissertation Committee for Thomas K. Bertoncino
certifies that this is the approved version of the following dissertation:

LINKING RHETORICAL SENSITIVITY
WITH THE ABILITY OF AN ATHLETIC TRAINING STUDENT
TO SUCCESSFULLY PERFORM A PATIENT MEDICAL INTERVIEW


Chairperson Lisa Wolf-Wendel

Date approved: November 3, 2010

Abstract

The purpose of this study was to investigate the extent to which the self-reported rhetorical sensitivity of a sample of athletic training students is positively related to successfully performing a patient medical interview. Particularly, the study focused on if athletic training students' reported communication behaviors is related to their ability to communicate effectively during a patient evaluation.

Thirty-nine senior undergraduate athletic training students from seven accredited athletic training education programs in the central part of the Midwest participated. The students answered a questionnaire that measured rhetorical sensitivity. Next, they performed a patient medical interview on a standardized patient. Athletic training students were instructed to gather important medical information, perform a clinical examination and discuss possible findings with the standardized patient. The patient medical interview provided the researcher an opportunity to observe and rate the athletic training students' communication behaviors. Plus, the patient medical interview gave a chance for the standardized patient to rate her satisfaction with the patient care provided by the athletic training student.

The study found that the athletic training students have moderate levels of self-reported rhetorical sensitivity and that they met expectations of successfully performing a patient medical interview. The results indicated a relationship between self-reported rhetorical sensitivity and observed effective communication behaviors during a patient medical interview. However, the results did not indicate a significant correlation between self-reported rhetorical sensitivity and standardized patient satisfaction. In conclusion,

the results of this study support the necessity for including communication skills training for athletic training students.

Acknowledgments

There have been many challenges in this journey, but I think pure determination for completion contributed to the achievement of this project. However, there are many people I would like to acknowledge for their contributions. I must thank Dr. Lisa Wolf-Wendel for all her assistance and support. She was very patient throughout the entire process, especially in the beginning when I struggled to narrow my variables down. I feel privileged for the one-on-one interaction with her. Others on my committee offered themselves willingly, and served me as mentors in my research, in the classroom as well as a colleague: Dr. Tracy Russo, Dr. Susan Twombly, Dr. Dongbin Kim, and Dr. David Carr.

In addition to my committee, I must mention and express sincere appreciation to all of the other individuals who supported me in completion of my research. Particularly, Dr. John Tew and Dr. Kevin Payne provided guidance on how to analyze statistical data, Julie Mack at the Kansas University NEIS Laboratory gave me insight as to how standardized patients can be used to gather information for research purposes, and Sarah Engels devoted numerous hours of her free time to be a standardized patient. I certainly could have not done this research project without them.

Finally, I must mention my wonderful family. Understanding why any person would want to pursue such a goal is difficult as an outsider, but my family never swayed in their support when years turned into more years. It's easy to talk about my daughters, Samantha and Brooklyn, whom I often did not see many nights because I was either attending class or researching in the library. They often helped me find my sanity in the

middle of all of the madness that surrounds pursuing a doctoral degree. And last but not least, thanks to my loving wife Ranetta. I express special thanks for her encouragement and the many sacrifices she made for me professionally, financially and personally; not once did she complain.

Thank you all,

Thomas K. Bertoncino, MS, ATC

Table of Contents

Abstract iii

Acknowledgments v

Table of Contents vii

List of Tables x

Chapter One: The Problem 1

Introduction 1

Rhetorical Sensitivity 3

Purpose of the Study 9

Research Questions 10

Need for the Study 11

Chapter Two: The Review of Literature 14

Introduction 14

Communication Process 19

The Patient Medical Interview:
Information Exchange and Relationship Development 20

Patient Medical Interview Models 22

Verbal Communication Behaviors 26

Appropriate and Effective Questions 27

Clarify the Conversations 27

Appropriate Language 28

Flow of Communication 29

Avoid Interruptions 29

Paralinguistic Cues....30
Non Verbal Communication Behaviors....31
Facial Expressions and Eye Contact....33
Proxemics and Posture....33
Gestures....35
Empathy....35
Listening....37
Chapter Three: The Methodology....40
Procedures....40
Standardized Patient Recruitment....41
Standardized Patient Training....42
Roles of the Standardized Patient....43
Instrumentation....43
Data Analysis....45
Chapter Four: The Results....46
Participant Characteristics....46
Statistical Analysis....47
Descriptive Statistics and Independent *t* Tests....47
Bivariate Correlations....50
Multiple Regression Analysis....51
Chapter Five: The Final Comments....53
Discussion....53

Implications....57
Limitations....59
Recommendations....60
Conclusions....61
References....63
Appendices....72
Appendix One: Kansas University Institutional Review Board Approval....73
Appendix Two: Informed Consent Form....75
Appendix Three: RHETSEN Scale....78
Appendix Four: Patient Medical Interview Scale....83

List of Tables

Table One: Participants Characteristics 46

Table Two: Means and Standard Deviations
Rhetorical Sensitivity and the Patient Medical Interview 47

Table Three: Means and Standard Deviations
Rhetorical Sensitivity and the Patient Medical Interview for Genders 48

Table Four: Means and Standard Deviations
Rhetorical Sensitivity and the Patient Medical Interview
for Athletic Training Students Who Completed a College Communication Course 49

Table Five: Bivariate Correlations
Rhetorical Sensitivity and the Patient Medical Interview 51

Table Six: Unstandardized Beta Predictors
Standardized Patient Information 52

CHAPTER 1

The Problem

Introduction

The ability of an athletic training student to communicate effectively is an integral part of being a successful health care provider. When it comes to patient care, evidence shows that effective communication is indispensible to the delivery of quality health care (Blanquicett, Amsbary, Mills, & Powell, 2007). For example, effective communication helps the health care provider establish caring relationships with patients. When patients feel that their health care provider uses a patient-centered approach, they are more likely to share important information regarding their health (Zanten, Boulet, & McKinley, 2007). Furthermore, effective communication improves outcomes such as patient satisfaction, adherence to treatment plans, and alleviation of medical problems (Markova & Broome, 2007; Rider & Keefer, 2006). Although abundant research has been conducted on various aspects of the health care provider-patient communication relationship, relatively little investigation has occurred on the communication behaviors that health care providers use during the patient medical interview (Cegala, Gade, Broz, & McClure, 2004). In fact, no previous research that investigated how athletic training students communicated during the patient medical interview was discovered.

The patient medical interview is an important fundamental process in health care and is one of the clinician's most important activities when providing care to a patient (Frankel & Stein, 1999). The patient medical interview includes both content and process (Enzer, Robinson, Pearson, Barton, & Walley, 2003; Kurtz, Silverman, Benson,

& Draper, 2003). Content is defined as the information that practicing health care providers are expected to obtain when taking patient history and to consider when making a diagnosis (Kurtz et al., 2003). Process is the methods used to collect the patient's health information, which requires communication skills that promote the flow of information and the interpersonal skills to establish a patient relationship (Enzer et al., 2003). Both of these lead to obtaining accurate medical history, understanding the medical problem, providing information about the medical problem and diagnosis, developing a treatment plan, as well as expressing concern and care for the patient (Cegala, McGee, & McNeilis, 1996).

Patient satisfaction has widely been viewed as a criterion that determines the success of a patient medical interview. Patient satisfaction is dependent on the patient's perception of the health care provider's communication behaviors (Richmond, Smith, Heisel, & McCroskey, 2002). One characteristic that could support athletic training students producing effective communication during a patient medical interview is their level of rhetorical sensitivity. Rhetorical sensitivity occurs when the communicator is consciously aware of his communication decisions and adapts his communication to the situation (Motley, 1992). Most communication decisions are made unconsciously, yet in some circumstances how and what we communicate becomes conscious. According to Motley (1992) conscious communication decisions occur when conflict arises, if one recognizes a likely undesirable consequence in advance of the communication, if something surprisingly interferes with transmittal of the communication, and/or if the communication goals are difficult or otherwise troublesome. Since athletic training

students will probably experience conflict or come across a surprising situation that may obstruct communication during the patient medical interview, then rhetorical sensitivity offers an interesting point of consideration to explore communication production. Although there are other constructs that explain communication production, many view communication as being expressive and only study if the communication behavior occurred. The rhetorical sensitivity construct approaches communication production as being instrumental and looks at both if the communication occurred and gives underlying reasons as to why a particular communication behavior occurred. Instrumental (rhetorical) communicators are continually weighing their communication possibilities and understand the tendencies of others, which best promises to facilitate social cohesion and goal attainment (Hart & Burks, 1972). Given the fact that an athletic training student will socially interact with patients and perform hundreds if not thousands of patient medical interviews over his or her professional lifetime, the incidence of poor communication has the potential for enormous clinical consequences. Athletic training students need information from patients to determine a correct diagnosis and plan of care, and patients need an explanation of their underlying health problems. Therefore, this research focused on rhetorical sensitivity and its association with an athletic training student's ability to perform a successful patient medical interview. In order to understand this relationship, a detailed explanation of rhetorical sensitivity follows.

Rhetorical Sensitivity

A critical feature in effectively communicating is a person's ability to reflect and adapt his or her communication behavior as the situation changes (Spitzberg & Cupach,

1984). Duran and Spitzberg (1995) suggest that an individual must engage in the reflective process to filter through the repertoire of communication choices and keep those behaviors that are likely to be successful in a situation, while excluding the others. Also, Duran (1983) stated that effective communication could be accomplished when an individual recognizes interpersonal relationships and adapts his communication behaviors and goals for a given situation. Furthermore, concepts such as role taking and flexibility assist individuals to adapt their communication behavior (Duran & Spitzberg, 1995).

One would assume from these features that effective communication involves activities that are reflective in nature as well as the ability to adapt and appropriately select a communication behavior based on the situation and how the listener responds. Hart and Burks (1972) identified three types of communicators: rhetorical sensitive, rhetorical reflector and noble self. This typology provides insight to the behaviors individuals use to produce communication. The first type of communicator is a combination of the noble self and rhetorical reflector and is termed rhetorical sensitive (Hart & Burks, 1972). Athletic training students of this type would approach communication with an attitude that balances a concern for themselves and for others. Depending on the situation, rhetorically sensitive athletic training students consciously consider which communication behavior will elicit the greatest results to communicate competently. Rhetorical sensitivity represents an attitude toward how individuals encode their communicative decisions (Hart, Eadie, & Carlson, 1975). It represents a way that a person thinks about what message should be sent and how that message is relayed to the listener (Hart, Carlson, & Eadie, 1980). Furthermore, rhetorically sensitive people are

continually evaluating and adapting their communication behaviors to assure a positive interaction with another person or group of people. The rhetorical sensitive person will demand from himself or herself to consider communication alternatives and attempt to process and choose among all possible communication behaviors (Hart & Burks, 1972). The rhetorically sensitive person, however, does not choose a communication behavior on an impulse, but rather realizes the need for a particular behavior depending on the situation (Hart & Burks, 1972). Yet, if a consistent communication behavior does occur, it is because of the situation and not from a deficiency in the person recognizing the need to adapt to the situation (Hart & Burks, 1972).

Rhetorical sensitivity contains five components: acceptance of personal complexity, avoidance of communication rigidity, interaction consciousness, appreciation of communication ideas and tolerance for inventional searching. The first component, acceptance of personal complexity, states that every individual has a complex network of communicative behaviors (Hart et al., 1975). However, a rhetorically sensitive person will realize that only some of those behaviors need to be chosen during a given situation (Hart et al., 1980). This allows a person to accept the fact that one's communication behavior does vary, is inconsistent and unpredictable, which leads the individual to not be so concerned with self (Hart et al., 1975).

Second, is the idea that individuals must avoid communication rigidity. The rhetorically sensitive person must be flexible communicatively and refuse to choose the same communication behavior regardless of the situation (Hart et al., 1980). According

to Hart et al. (1975), a rigid approach to communication rules is viewed by the rhetorically sensitive individual as boring and characterless.

Third, a rhetorically sensitive person is conscious about the interaction of self with others in a given situation (Hart et al., 1980). Interaction consciousness is not derived from the fact that individuals choose a communication behavior just to pacify others or themselves, but rather is a blend of both a concern for the autonomy of the communicator's position as well as the concerns of the listener (Hart et al., 1975).

Fourth, rhetorical sensitivity includes the appreciation of the communicability of ideas. A rhetorically sensitive person understands that some situations require individuals to say nothing and other situations are teeming with rhetorical choices (Hart et al., 1980). Thus, the rhetorically sensitive individual is willing to adjust which messages are to be communicated (Hart et al., 1975).

Fifth, rhetorical sensitivity pertains to the tolerance for searching for new ways to communicate. This component argues that a rhetorically sensitive person recognizes that there are many ways of sending a message. However, most people do not work through the several communicative choices an individual has during an interaction. Rhetorically sensitive individuals, however, are willing to make the effort to select carefully among their communicative repertoire to produce messages that others clearly understand to produce the best outcome (Hart et al., 1980; Hart et al., 1975).

The second type of communicator that Hart and Burks describe is the rhetorical reflector. Hart and Burks (1972) described rhetorical reflectors as individuals who lack self-confidence, rarely convey their points of view and communicate only what they

believe others want to hear. According to Snyder (1974), these people are categorized as high self-monitors. High self-monitors observe their self-presentation and expressive behavior in a given social situation and script their communication behavior after the expectations of other persons, nearly every time (Snyder, 1974). Therefore, a rhetorically reflective athletic training student is uncertain with their communication decisions and will often give in to the patient's demands, no matter if those demands are good or bad.

The third type of communicator that Hart and Burks explained is the noble self. Athletic training students who are in this category would tend to communicate with little variation and adjustment to others or the situation. Snyder (1974) described these people as low self-monitors. Low self-monitors communicate in ways that fit their own needs, with little or no attention to other people (Snyder, 1974). Therefore, a noble self athletic training student is inconsiderate to the patient's expressions and will adopt a communication style that accommodates their own desires.

The components of rhetorical sensitivity, when incorporated in a communicative situation, should help the athletic training student effectively communicate and develop a trusting relationship with the patient that in the end provides better care. Furthermore, because the types and severity of injuries that an athletic training student may encounter daily are so unpredictable, the athletic training student needs to avoid using a single communicative behavior. Athletic training students who are willing to adapt their communicative behavior will likely be able to cope with the ever-changing situations that might occur during a patient medical interview. This does not mean that rhetorically sensitive athletic training students must choose every communication behavior from their

repertoire; they should enact only those behaviors to effectively manage the situation (Hart & Burks, 1972). For instance, rhetorical sensitivity helps the health care provider overcome the many situational, physical, and cultural communication challenges that may obstruct patient care (Diaz-Duque, 1989; Spitzberg, 1983). Times of crisis can create communication challenges and place extraordinary demands on decision-making that involves constant judgments and trade-offs. During a crisis, an individual must communicate in way that reassures the listeners about the uncertainties, difficulties, and complexities of the emergency (Koplan, 2003). Much of the responsibility of athletic trainers is to be prepared for emergency situations both on and off the playing field. An athletic trainer who can communicate effectively during an emergency or even during a non-life threatening situation can alleviate a great deal of the anxiety and decrease the emotional impact an athlete may experience because of an injury (Naylor, 2007). Additionally, with the added expectations to care for a larger patient population, time constraints are a big concern for athletic trainers. However, with effective communication, the balance of time and the completeness of the patient medical interview can be optimized (Lein & Wills, 2007). Furthermore, athletic trainers are no longer just caring for athletes; they are working in a wide range of job settings as well as with a diversity of people from different cultures, ages, groups, and activity levels. As a result, athletic trainers will likely face the communication challenges related to those populations such as hearing, vision and physical impairments as well as language barriers. If a proper message is not clearly sent, then the patient may withdraw from the communication, or even worse, from the health care process totally. Given these

demands, the athletic trainer needs to be able communicate effectively. Using a positive communication style will almost certainly give them the advantage to handle a variety of challenges and responsibilities (Wiese, Weiss, & Yukelson, 1991).

In conclusion, the examination of athletic training students' rhetorical sensitivity communication skills during a patient medical interview provides an understanding of the athletic trainer-patient communication. Hart and Burks (1972) stated that an individual who uses rhetorically sensitive behaviors as part of the interaction becomes much more socially productive. Therefore, athletic training students with a greater level of rhetorical sensitivity should have a better probability of producing more appropriate and effective communication behaviors during the patient medical interview than individuals with a less skill in communicating.

Purpose of the Study

Understanding the process of communication by the health care provider and its effect on patient care are increasingly receiving more attention (Tasso & Behar-Horenstein, 2008). Because rhetorical sensitivity represents an important behavior that can contribute to a successful patient medical interview, it is certainly worth investigating. For all of its contribution, however, rhetorical sensitivity has been mainly applied to communication literature and rarely in the field of medicine. In light of the above discussion, the primary purpose of this study was to investigate the degree to which the self-reported rhetorical sensitivity demonstrated by athletic training students is positively related to successfully performing a patient medical interview. A secondary

purpose was to use the results to discuss the implications for future athletic training student communication skills instruction.

Research Questions

In order to study the link between rhetorical sensitivity and athletic training students' ability to successfully perform a patient medical interview, the following questions were formulated.

1. What is the level of self-reported rhetorical sensitivity of athletic training students?
2. To what extent is an athletic training student's self-reported rhetorical sensitivity related to standardized patient satisfaction?
3. To what extent is an athletic training student's self-reported rhetorical sensitivity related to observed effective communication behaviors during a patient medical interview?
4. Is there a gender difference in self-reported rhetorical sensitivity?
5. Is there a gender difference in standardized patient satisfaction?
6. Is there a gender difference in observed effective communication behaviors during a patient medical interview?
7. To what extent does completing a college level communication course relate to an athletic training student's increased level of self-reported rhetorical sensitivity?
8. To what extent does completing a college level communication course relate to standardized patient satisfaction?

9. To what extent does completing a college level communication course relate to observed effective communication behaviors during a patient medical interview?
10. Is there a relationship between overall grade point average and an athletic training student's level of self-reported rhetorical sensitivity?
11. Is there a relationship between overall grade point average and standardized patient satisfaction?
12. Is there a relationship between overall grade point average and observed effective communication behaviors during a patient medical interview?
13. Controlling for relevant demographic variables and observed effective communication, what is the relationship between an athletic training student's self-reported rhetorical sensitivity and standardized patient satisfaction?
14. Controlling for relevant demographic variables and self-reported rhetorical sensitivity, what is the relationship between observed effective communication behaviors and standardized patient satisfaction?

The Need for the Study

Communication between the athletic training student and patient is considered an important part of the patient medical interview. Many medical professions have become responsive to make certain that fundamental communication behaviors of patient care are integrated and assessed within medical curricula (Whelan, 1999). Much of a student's success in academics can be attributed to the degree of an individual's communication competence (Hawken, Duran, & Kelly, 1991; McCroskey, Both-Butterfield, & Payne,

1989; Rubin, Graham, & Mignerey, 1990). However, athletic training education has only minimally emphasized the basic communication process and its relationship to the outcome of health care, more specifically during the patient medical interview. As a result, the need to expand our understanding of rhetorical sensitivity is critical for the athletic training profession.

First, the application of rhetorical sensitivity to athletic training will further develop the standards of the athletic training profession, specifically in the area of pedagogical development. Research supports the fact that students do not automatically develop good communication techniques; rather, these must be taught (Tamburrino, Lynch, Nagel, & Mangen, 1993). Teaching athletic training students to communicate effectively should help them to widen their repertoire of communication behaviors in order to successfully deal with patients. Clinical assignments are a central component of the academic preparation of athletic training students and assist them to integrate theory and practice by providing opportunities that strengthen their knowledge, skill, and abilities in actual clinical settings with real patients. By identifying those predictors that contribute to the student's overall clinical performance, faculty can help students who lack particular skills to improve their athletic training knowledge base. Further, this study can provide a standardized method for the assessment of communication skills during clinical assignments.

Furthermore, athletic training education programs have the responsibility to produce graduates who have effective communication skills. When it comes to patient care the relevance of rhetorical sensitivity is quite significant. For instance, effective

communication reduces medical errors, improves patient outcomes, and diminishes the chance of malpractice suits (Rider & Keefer, 2006). For those reasons and given the fact that rhetorical sensitivity has not received attention in athletic training, knowledge of behaviors that generate effective communication during a patient medical interview is important for improving curricular programs and patient care.

CHAPTER 2

The Review of Literature

Introduction

Before reviewing the literature on communication and the patient medical interview, a brief description about the history of athletic training, responsibilities of athletic trainers and how one becomes an athletic trainer occurs.

Athletic training can be traced back to the late nineteenth century with the emergence of intercollegiate athletics. The duties of the athletic trainer at that time were mainly to "rub down" the athlete and occasionally provide home remedies (Prentice, 2009). When the National Athletic Trainers' Association was established in 1930, athletic training officially began to have an identity. The professional association however, did not survive long as it struggled for existence during the Great Depression and World War II era. But with tremendous determination, the few practicing athletic trainers re-established the National Athletic Trainers' Association in 1950. Upon re-establishment of the National Athletic Trainers' Association, athletic trainers immediately started to organize committees for education, certification, membership and recognition to advance the profession (NATA News, 2006).

The athletic training profession has steadily progressed from those early efforts and now certified athletic trainers are recognized by the American Medical Association as highly educated and respected health care providers who are prepared to face far more challenges than ever. For example, Bostic (2008) reported that today's certified athletic trainers have a multitude of complex responsibilities they must deal with daily. Although

there are many more, responsibilities range from managing injuries and psychological problems of the patient to managing budgets and leading staff, which demands that the certified athletic trainer is capable of functioning at a high level. Although Certified athletic trainers primarily are employed in professional, intercollegiate, or high school athletic environments, they also work in clinical settings as well. Within each of these employment settings certified athletic trainers construct and monitor therapeutic rehabilitation programs and perform treatments using various therapeutic modalities enabling them to care for the patient. Therefore, it is the responsibility of athletic training educators to provide high quality curriculum programs that equip athletic training students with the necessary skills to successfully handle a variety of challenges and responsibilities (Weidner & Henning, 2002).

Students who are interested in becoming a certified athletic trainer must earn a bachelor's or a master's degree by completing an athletic training education program accredited by the Commission on Accreditation of Athletic Training Education and pass a comprehensive examination administered by the Board of Certification. The athletic training student's education consists of a variety of didactic, laboratory and clinical courses that are competency/proficiency-based approach, which emphasizes practiced oriented outcomes of cognitive and psychomotor skills. Athletic training students receive instruction in the following content areas: risk management and injury prevention; pathology of injuries and illnesses; clinical examination and diagnosis; acute care of injury and illness; pharmacology; therapeutic modalities; therapeutic and rehabilitative exercise; general medical conditions and disabilities, nutritional aspects of injury and

illness; psychosocial intervention and referral; healthcare administration; professional development and responsibilities. The Board of Certification examination is a computer-based exam that covers six domains in areas of prevention; clinical evaluation and diagnosis; immediate care; treatment, rehabilitation, and reconditioning; organization and administration; and professional responsibility. The examination consists of questions that simulate practical scenarios that an athletic training student must solve to determine their clinical decision-making.

A great deal of an athletic training student's education occurs through clinical assignments. Clinical assignments provide practical experiences that should strengthen both the student's hands-on technical skills and communication skills. Although hands on technical skills are very important, effective communication skills allow the athletic training student to effectively interact with the patient to exchange information in attempt to resolve the patient's problem. If a student is an incompetent communicator a productive relationship may not be formed and the student may not get the optimum chance to practice their clinical decision-making skills. A student who can overcome their communication ineffectiveness may experience success during their clinical placements, and nurture their potential to become clinically competent health care providers (Tan, Meredith, and McKenna, 2004).

In striving to prepare athletic training students for entrance into the profession, education programs must balance the curriculum to teach both effective hands-on technical and communication skills. According to Weidner and Henning (2002), competent communication skills are essential components to being a proficient athletic

trainer. Undoubtedly there are many skills we would expect athletic training students to possess, however the specific skills under investigation in this study are rhetorical sensitivity communication and its influence on the patient medical interview. Finch (2004) stated that health care providers (nurses) understanding of the patient's situation occurs through competent rhetorical communication is more likely to bring forth an open, honest relationship with the patient that ultimately improves patient health condition. Competent rhetorical communication transmitted through effective language, appropriate expressions, and good speaking and listening skills are necessary characteristics to effectively carrying out the role of a caregiver (Finch, 2004).

The benefits of communicating effectively have been researched at length. In part, this is because communication has been studied in a variety of disciplines (Wilson & Sabee, 2003). Unquestionably, many health care professions have recognized the importance of effective communication. For example, various regulatory and medical organizations now require competence in communication skills in their practice. Among these are the Association of American Medical Colleges, Association of Canadian Medical Colleges, and the Institute for International Medical Education (Rider, Hinrichs, & Lown, 2006). Also, studies point to the fact that competent communication is beneficial to many health care professions because it is associated with improved health care results. For instance, Grant, Cissna and Rosenfeld (2000) researched physicians' communication behaviors and its relationship with cancer patients' satisfaction. The study concluded that patients are likely to be more satisfied with their physicians if they perceived the physicians' communication positively. Additionally, these patients

perceived their physicians as being significantly friendlier. As a result, patients were more willing to participate and were more open to a variety of treatment options.

Additionally, competent communication behaviors have been identified as essential for nursing clinical effectiveness. According to Sheppard (1993), nurses have realized that effective communication helps them evaluate and intervene with patient problems. Zhang, Luk, Arthur, and Wong (2001) reported that competent communication was a personal characteristic that contributed to effective nursing performance. The use of interpersonal communication helps the nurse understand the patient's emotions, make sound judgments, and be compassionate, leading to an improved overall performance. Morrison and Burnard (1989) measured nurses' communication behaviors and found that nurses who perceived they have effective interpersonal communication skills reported that these skills aided them to maintain the nurse-patient relationship.

Anderson, Ogles, and Weis (1999) also reported that effective communication helps the psychotherapist build, enhance, and maintain therapeutic partnerships with patients. Therapeutic partnerships promote teamwork between the therapist and patient and in turn give the therapist the ability to understand a wide range of the patient's problems, thus improving patient outcomes. Tan, Meredith, and McKenna (2004) stated effective communication assists occupational therapy students to experience success during their clinical placements and nurture their potential to become clinically competent health care providers. Communicating competently ensures that occupational therapy students interact with patients in a way that best obtains the patient's health

information in attempt to resolve the patient's problem. Likewise, Jette, Bertoni, Coots, Johnson, Mclaughlin, and Weisbach (2007) found that when physical therapy students appropriately used an assortment of verbal and nonverbal communication skills, together with clinical skills, they demonstrated entry-level performance.

However, to understand fully the proposed relationship between athletic training students' rhetorical sensitivity and successfully performing a patient medical interview, it is first necessary to explore the communication process.

The Communication Process

There are myriad definitions and examples through which researchers have tried to define communication (Grover, 2005; Jones, 1994; O'Keefe, 2001; Spitzberg, Brookshire, & Brunner, 1990). For communication to occur, messages that express the sender's thoughts and feelings must be sent and received by another (Devito, 2002). Many scholars agree that communication involves two or more people and has elements of a sender, receiver, message, and method of delivery (Tamparo & Lindh, 2000).

The sender is the person who initiates communication by carefully creating a message using words and nonverbal clues and sends it to the receiver (Tamparo & Lindh, 2000). The receiver is the targeted recipient of the message and interprets what he or she thinks the sender means (Krivanek, 2000). Additionally, in order for communication to take place, the sender needs to select the method of delivery that best represent the message that needs to be relayed (Devito, 2002; Krivanek, 2000). The message is the content to be communicated and can be sent by either verbal or nonverbal delivery methods, but it is usually a combination of both (Devito, 2002). Regardless of the

content of the message and the mode of delivery, the message sent must be appropriate and effective for the situation and the receiver (Tamparo & Lindh, 2000).

Before communication delivery occurs, the sender encodes the message. Encoding involves translating a message that has to be communicated, so that the receiver is able to decode and have full meaning of the message (Krivanek, 2000). Each time a person communicates, several things influence the encoding and the decoding of the message. As Krivanek (2000) stated, messages are influenced by internal and external factors. Internal factors include the communicator's gender, intelligence level, principles, desires, attitudes, emotions, knowledge and experiences, while the external factors include verbal and nonverbal cues. During a social situation, these factors often come together and influence the outcome (Krivanek, 2000). Therefore, an individual with a high level of rhetorical sensitivity is able to accurately encode and communicate competently in a given social situation (Hart & Burks, 1972).

The Patient Medical Interview: Information Exchange and Relationship Development

There is a general agreement that competent communication is at the center of an effective patient medical interview (Cegala, Coleman, & Turner, 1998; Cegala et al., 1996). Even a modest improvement in communication effectiveness can lead to better diagnostic accuracy, which can greatly affect outcomes (Frankel & Stein, 1999). However, evidence shows that many medical students who lack formal communication training are quite poor in their interaction skills during interviews (Evans, Stanley, & Burrows, 1992). They routinely show non-facilitative interviewing skills, fail to introduce themselves and do not adequately conclude the visit, frequently interrupt,

express little concern for the patient's problems and are less attentive to the patients' well-being and psychosocial concerns (Evans et al., 1992).

The interaction between the health care provider and patients during the patient medical interview usually takes a question and answer format with the goal of exchanging information to resolve the medical problem (Sharf, 1990). Cegala (1997) stated that effective exchange of information during the patient medical interview occurs on three dimensions: information-seeking, information-giving, and information-verifying. In Cegala's study, information seeking was defined as the use of communicative behaviors on the part of health care providers and patients that are intended to gather information. More specifically, information-seeking behaviors include the use of closed, open, and embedded questions health care providers use to connect with their patients during the patient medical interview. Information-giving reflects the sharing of information about oneself with another and includes providing information about the cause of the medical problem, its history and symptoms, diagnosis, treatment, required tests, and prognosis (Cegala et al., 1998). Information-verifying is concerned with the communication behaviors that intend to increase the understanding between all parties involved and include clarifying statements, relevant questions, and restatements (Cegala, 1997).

In addition, the patient medical interview has a relational communication dimension. The relational dimension focuses on patient-centered communication that serves to express care and concern as well as show trust and respect toward the patient (Cegala et al., 1996). Patient-centered interviewing promotes the flow of information to

establish rapport with the patient (Enzer et al., 2003). Although research states that the relational aspect of medical communication is important, some suggest that it may be less important than information exchange for both health care providers and patients (Cegala, 1997).

Patient Medical Interview Models

At the very least, effective communication is considered an integral part of the patient medical interview. Carefully using good communication behaviors can serve as a means to bridge the gap between the health care provider and the patient, leading to an improved medical encounter (Pfeiffer, Madray, Ardolino, & Willms, 1998). Examples of competent behaviors might include how well the patient medical interview is structured and the appropriate use of verbal and nonverbal communication (Kurtz et al., 2003). This section identifies specific communication models as well as verbal and nonverbal communication behaviors associated with an effective patient medical interview.

When performing a patient medical interview, health care providers typically follow an organized structure that consist of listening to the patient's presentation of the medical problem, past medical history, and psychosocial history as well completing a physical examination and discussion of the treatment (Sharf, 1990). The traditional patient assessment model that athletic training students use is H.O.P.S. (History, Observation, Palpation, and Special Tests). Prentice (2009) stated that obtaining as much information about the patient's medical history is the single most important portion of the injury evaluation. Prentice goes on to say that understanding the mechanism of injury and listening to patient's complaints can provide clues about the injury in order to

provide proper immediate treatment and follow-up care. Although H.O.P.S. might be a useful framework to teach beginning level athletic training students to use when assessing patients, it doesn't provide the depth needed to do a thorough patient medical interview. To obtain a proper history, models that include effective communication behaviors are necessary (Rahman, 2000).

Other health care professions have developed and use more complex models as a means to facilitate effective communication during the patient medical interview. Although there are many health care provider communication competence models, none include all of the important communication skills, though some come close (Hullman & Daily, 2008). However, the following health care provider communication models can provide an overview of the various guiding principles that are widely used in health care to improve communication. Furthermore, studies have rated the following models high for incorporating the desired communication behaviors for a successful medical encounter (Hullman & Daily, 2008; Schirmer, Mauksch, Lang, Marvel, Zoppi, Epstein, Brock, & Pryzbylski, 2005).

First, the Kalamazoo Consensus Statement outlines seven important areas for competent physician-patient communication in medical encounters (KCS, 2001; Rider et al., 2006). The KCS includes 1) building a relationship, which emphasizes a patient-centered approach to patient care and includes the active participation of the patient with decision making; 2) opening the discussion, which stresses the importance of establishing/maintaining a personal connection, allowing the patients to complete their opening statements; 3) gathering information, which is the use of appropriately structured

probing questions, clarifying and summarizing information, and actively listening using verbal and nonverbal techniques; 4) understanding the patient's perspective, which underlines the importance of acknowledging and responding to the patient's ideas, feelings and values; 5) sharing information, which emphasizes providing feedback and using language the patient can understand; 6) reaching an agreement, which underscores the need to encourage patient participation in decision making process; 7) and finally, providing closure, which calls attention to making sure the patient doesn't have any other underlying issues or concerns (KCS, 2001; Rider et al., 2006).

Second, the Four Habits Model (Frankel & Stein, 1999) is comprised of various communication behaviors needed for an effective patient medical interview that are organized into areas of skills, techniques and payoffs. These elements are very much interrelated (Frankel & Stein, 1999).

"Habit One: Invest in the Beginning" details three tasks that must be accomplished at the beginning of a patient medical interview. First, the athletic training student must create a relationship quickly by establishing a welcoming environment. This can easily be done by an introduction or extending a warm welcome. Even a simple handshake can initiate trust and respect to create a personal connection. Additionally, the health care provider must use strategies that get patients to accurately describe the reason they are seeking care. This involves using a variety of verbal and nonverbal communication behaviors such as open-ended questions, posture, listening, and phrases like "I see," "Go on" and "Tell me more." Also, health care providers need to let the

patient know they understand by summarizing and paraphrasing their concerns followed up by explaining to the patient what will occur next (Frankel & Stein, 1999).

"Habit Two: Elicit the Patient's Perspective" is concerned with getting the patient involved in the assessment process and contains three skills. The health care provider needs get the patient's perspective about what caused the problem, elicit specific requests or goals, and find out how the injury has affected the patient's life. One might use questions like "What are your thoughts that to led to this injury or illness?," "How are you hoping that I can help you reach your goals?" or How has the injury affected your work or participation in sports?" (Frankel & Stein, 1999).

"Habit Three: Demonstrate Empathy" consists of understanding the patient's feelings but also looking for opportunities for the athletic trainer student to convey to the patient that he or she understands what the patient is going through emotionally. Empathy can be expressed by using nonverbal behavior such as appropriate facial expressions or words of encouragement (Frankel & Stein, 1999).

"Habit Four: Invest in the End" requires sharing information with the patient. The health care provider needs to frame the end of the medical interview by delivering diagnostic information based on the patient's original concerns. Moreover, the health care provider needs to educate the patient on the injury/illness, collaborate and discuss treatment goals as well as complete the visit by asking "What question do you have?" or "Is there anything I can do for you?"

Finally, the Calgary-Cambridge Communication guides were created to outline effective physician-patient communication skills in the medical interview and have been

widely adopted at many medical institutions as a framework for teaching students (Kurtz et al., 2003). The Calgary-Cambridge guides delineate more than 70 core evidence-based communication behaviors that fit into a set of objectives of a patient medical interview. These objectives are similar to the other patient medical interview models mentioned before and include initiating the session, gathering information, providing structure to the consultation, building a relationship, explaining and planning, and closing the session.

Furthermore, embedded within those models are suggestions to use a combination of appropriate verbal and nonverbal communication behaviors. Although the following examples are not exhaustive, the intent is to identify some key verbal and nonverbal communication behaviors that athletic training students can use to improve the patient medical interview. Athletic training students who are able to select and adapt these communication behaviors will likely improve the interaction they have with patients, staff, and others they come in contact with as well as improve the outcome of health care.

Verbal Communication Behaviors

When a form of communication is spoken, it is considered a verbal communication (Tamparo & Lindh, 2000). In health care, often the patient relationship is established with some form of verbal communication, as it is an important component of medical care (Scherz, Edwards, & Kallail, 1995). However, Shaikh, Knobloch, and Stiles (2001) stated that as the patient visit proceeds from taking a medical history and conducting a physical examination to concluding the visit with the diagnosis and treatment plans, often the verbal communication process becomes less effective. A study done by Scherz et al. (1995) evaluated 30 communicative behaviors and found that the

most appropriate verbal behaviors during the physician-patient interaction were an assortment of communication styles that included turn-taking, appropriate paralinguistic, behaviors as well as variety of speech acts. That same study also reported that verbal communication behaviors of interruptions, excessive vocal intensity, and lack of conciseness were thought to be inappropriate. Therefore, the following are considered behaviors that athletic training students need to either use or avoid in order to improve the communication process during the patient medical interview.

Appropriate and Effective Questions

To further encourage patients to express their concerns Grover (2005) argued that appropriate construction of open-ended rather than closed-ended questions would affect the flow of the conversation. Simmons (1998) stated that health care providers often ask questions that limit the responses possible. Using probing questions that are open-ended requires more than a "yes" or "no" reply and gets patients to fully verbally express their concern. Open-ended questions help clarify the conversation by promoting interaction and encouraging the patient to expand and give more details about his or her situation (Grover, 2005; O'Keefe, 2001). While open-ended questions are preferred, closed-ended questions are still necessary. Closed-ended questions force the patient to get to the point with their problems. However, closed-ended questions should not be the foremost method to acquiring information (Grover, 2005).

Clarify the Conversation

Furthermore, to help clarify the conversation during the patient medical interview, an athletic training student should paraphrase. In paraphrasing, the patient's

communication is reaffirmed, but summarized, using fewer words. Paraphrasing allows the health care provider to return the message back to the patient, although perhaps stated slightly differently, and allows the health care provider to acknowledge the patient's presentation of his or her problems. Paraphrasing reassures the patient that the health care provider is listening and has a clear understanding of the patient's concerns. Paraphrasing should be done in nearly all, if not all, situations and should not only summarize the patient's statement, but also consist of feedback that encourages the patient to elaborate more on their concerns. Additionally, by paraphrasing the patient's answers, the health care provider will be able to elaborate on the full meaning of the message, which in the end will advance the conversation and relationship (Grover, 2005; O'Keefe, 2001).

Appropriate Language

During the patient interaction not being able to choose the right words can sometimes produce an unclear message. Avoiding large, technical medical terminology or long-winded statements will provide for a more productive interaction. According to Simmons (1998), perhaps one of the biggest causes of poor verbal communication is the overuse of medical jargon as patients are typically not fluent with scientific terms. Although the use of some medical terminology is necessary, the use of everyday words tends to be more productive, allows the patient to participate in the conversation, builds patient rapport, encourages the patient to provide treatment strategies, and eventually the patient takes more responsibility for their health care (Devito, 2002; Simmons, 1998). In short, to establish effective verbal communication, athletic training students need to

phrase their questions or responses to be concise and be at a level that matches the medical vocabulary of the patient.

Flow of Communication

The use of verbal facilitators such as “umm-hmm,” “go on,” and “how so” or “and then” can be an effective communicative tool when talking to patients (Grover, 2005). Using verbal facilitators during the communication encourages the patient to continue to express their concerns. Nishizawa, Saito, Ogura, Kudo, Saito, & Hanaya (2006) said using supportive responses such as “hmm,” “yes, yes” or “uh huh” when listening to the patient enhanced the patient relationship and encouraged positive patient outcomes. These effective verbal interpersonal facilitators don’t necessarily guide the interaction in a specific direction; rather, they help the patient to continue to share, collaborate and build a positive health care provider-patient relationship (Grover, 2005).

Avoid Interruptions

A road block to effective communication is the number of interruptions during a conversation. Interruptions create an ambiguous environment of understanding for the patient. According to Rhoades, McFarland, Finch, and Johnson (2001), most patients and physicians consider effective verbal communication essential for making an accurate diagnosis, which can be hampered by interruptions. Their study found that numerous interruptions occurred during office visits and were due to the health care provider directly cutting off the patient. They stated on average patients spoke only 12 seconds before being interrupted and were typically interrupted twice during a visit. Interruptions send a message to the patient about the interest of the health care provider to listen and

understand their needs; consequently patients perceive the treatment session as less favorable. According to Simmons (1998), simply remembering to provide patients their turn to talk will provide an equal exchange of information between participants while promoting a relationship that is more meaningful and productive.

Paralinguistic Cues

The term paralinguistic is used to describe the various dimensions of verbal communication such as tone, pitch, volume and speed (Krivanek, 2000). Health care providers need to realize the power of their voice and need to consider how their emotions can be expressed through their voice (Haskard, Williams, DiMatteo, Heritage, & Rosenthal, 2007). The tone of voice as well as pitch, volume and speed can express a variety of emotions, ranging from excitement to depression. For example, the use of unvarying levels of pitch can be monotonous and can be perceived as unhappy and sad, speaking too loudly can mean anger, or rapid speech may mean excitement, while slower speech exhibits depression. Finally, fluency of speech is also important; frequently using "ah" or "er" to connect sentences distracts the patient from the central message. A study conducted by Haskard et al. (2007) involved 61 primary care physicians and 81 nurses who were audio recorded and analyzed for their tone of voice. The findings revealed that after dealing with health care providers who used caring and professional voice tones, the patients rated the experience as positive and reported that they respected and were more confident toward their health care provider. According to Haskard et al. (2007), paralinguistic behaviors are a vital component to establishing effective patient relationships.

Nonverbal Communication Behaviors

Verbal communication can't always completely express what an individual is communicating or feeling: therefore an individual needs to be aware that nonverbal communication can contribute to the message as well. Just as it is important to use effective verbal communication, it is equally important to use effective nonverbal communication (Devito, 2002). Often nonverbal communication is used to clarify the message that is being sent to another person. Nonverbal communication complements the verbal message by emphasizing the spoken word and provides full meaning to the communication (Krivanek, 2000; Preston, 2005). For example, a wrinkled forehead can communicate confusion or a simple nodding of the head can mean an understanding (King, 1991).

It is generally agreed that only a small portion of the meaning of the conversation is contained in the spoken words. Experts tell us that 70 percent of communication is nonverbal and 30 percent is actually verbally communicated (Devito, 2002; Moore, 2006). It is important to recognize that nonverbal communication has more persuasive power, is more enduring, helps to convey the message, and is more convincing than verbal communication (Eckman, 1993; Preston, 2005; Tamparo & Lindh, 2000). For instance, if conflict occurs during a conversation, then nonverbal communication such as facial expressions and gestures usually prevail over the verbal forms of communication (Preston, 2005). Nonverbal communication is one of the most important behaviors to develop because valuable information can be gained through the use of nonverbal messages (Grover, 2005).

Verbal communication may also be misinterpreted; therefore nonverbal communication cues can provide another method to send a message and connect with the patient (Grover, 2005). Robinson and Stivers (2001) analyzed the connection between verbal and nonverbal communication during a physician-patient relationship and found that nonverbal communication helped dictate the direction and flow of the conversation. For example, a change in body position by the physician such as standing up after taking patient history would signal to the patient that they are ready to perform a more thorough physical examination. Lepper, Martin, and DiMatteo (1995) stated that when the physician uses nonverbal communication to interact with the patient, the physician answered questions more clearly, built a stronger relationship, and improved patient satisfaction and health care outcomes. Further evidence was observed in a study using video and audiotapes of treatment sessions with physical therapists and patients. Researchers recognized that nonverbal communication such as eye gaze, head nodding, smiling, forward lean, and touch facilitated rapport building, which led to establishing good relationships with their patients (Roberts & Bucksey, 2007)

Countless nonverbal communication behaviors are used with the intent to convey a message. Nonverbal forms of communications include the use of body language such as facial expressions, gestures or other forms of expressions used to communicate (Grover, 2005; Nishizawa et al., 2006; Spitzberg et al., 1990; Tamparo & Lindh, 2000). Furthermore, Conlee, Olvera, and Vagim (1993) stated that nonverbal forms of communications included physical as well as psychological elements such as appropriate eye contact. Additionally, nonverbal communication has been described as the ability to

display emotions of caring and compassion during an interaction (Grover, 2005; Hojat, Mangione, Nasca, Gonnella, & Magee, 2005; Zhang et al., 2001). According to O'Keefe (2001), these nonverbal behaviors improve the health care provider's ability to explain the diagnosis and treatment options to the patient.

Facial Expressions and Eye Contact

The face and eyes are often the first things we look at when engaging in a conversation, and unfortunately often are the parts that we shy away from first. However, facial expressions and eye-to-eye contact during a conversation are key components to competent communication (Krivanek, 2000; Nishizawa et al., 2006; Tamparo & Lindh, 2000). Facial expressions such as smiling provide clues that indicate the health care provider understands what is being said (Nishizawa et al., 2006; Tamparo & Lindh, 2000). Preston (2005) stated no other nonverbal communication forms carry more weight than looking someone straight in the eyes. Eye contact is perceived as concentrating on the patient. It controls the flow of the conversation and often signals the beginning and end of the conversation (Krivanek, 2000). On the other hand, a lack of eye contact can be interpreted as lack of interest and even avoidance (Tamparo & Lindh, 2000). Eye contact shows a person's willingness to listen, be attentive, that he or she cares about the other person's point of view and respect the other person's worth, all of which lead to a better health care provider-patient relationship.

Proxemics and Posture

Proxemics and posture are other important forms of nonverbal communication. Proxemics is the spatial separation individuals naturally maintain in interpersonal

relationships. When a health care provider maintains a comfortable distance from the patient, the patient will tend to openly express his or her concerns, building and promoting a friendlier relationship (Nishizawa et al., 2006). However, if a health care provider invades a patient's personal space, the patient may feel that the health care provider is too aggressive and therefore may feel frightened and not communicate their problems (Tamparo & Lindh, 2000). Additionally, posture can be a form of nonverbal communication. A health care provider who practices good posture is perceived as being confident, enthusiastic, and energetic, therefore improving the health care outcomes (Tamparo & Lindh, 2000). Nishizawa et al. (2006) pointed out that a lean forward posture increased perceived compassion for the patient, which reflected a serious listening attitude. According to Preston (2005), when seated, a health care provider should lean slightly forward and when standing should stand balanced and erect. Both signal patients that the health care provider genuinely is concerned about their problems. Research conducted by Conlee et al. (1993) measured 117 participants and found correlations between attention behaviors and patient satisfaction, as patients perceived that their physicians exhibited little warmth and friendless when they didn't use effective nonverbal communication behaviors. Preston (2005) argued that posture such as slumping in the chair or putting one's hands on his or her chin when gathering patient information can be interpreted that the health care provider is bored and tired. Both leave the patient unsatisfied with their relationship with health care provider.

Gestures

Using gestures as a way to communicate can be very useful. The body naturally expresses individuals' true feelings and most people use gestures without even consciously knowing at some point in time during a conversation. But whether gestures are consciously or unconsciously intentional, the message is relayed (Tamparo & Lindh, 2000). Gestures can be used to reinforce and clarify what the health care provider is saying and hold the patient's attention (Preston, 2005; Tamparo & Lindh, 2000). Gestures include, but are not limited to, rubbing and scratching the chin when puzzled, waving hands to accentuate the point of the message, shrugging shoulders when unsure, and even nodding the head can encourage the speaker to continue. As good as it is to use gestures during a conversation, too much of a good thing can be harmful to the health care provider-patient relationship. A health care provider should take into consideration that although expressive hand gestures convey a message, too much gesturing is considered unprofessional. However, subtle confirmations of nodding of the head every once in a while implies that the health care provider is engaged in the conversation and paying attention as well as making the patient feel understood and more likely to consider the patient's point of view (Preston, 2005).

Empathy

Communication is more complex than just being able to carry on a conversation, but also involves having a genuine interest to care for the patient. The ability of the health care provider to share feelings and show empathy for the patient's well being will also establish a positive relationship (Grover, 2005; Hojat et al., 2005; O'Keefe, 2001;

Zhang et al., 2001). Empathy is not to be confused with sympathy as sympathy involves pity with or sorrow for the patient. Empathy, however, includes components of authentically feeling what the patient feels, accurately evaluating the patient's point of view and then being able to communicate an understanding of the patient's needs to the patient (Grover, 2005; Horsfall, 1998). Other studies describe empathy as having both affective and cognitive characteristics. Affective empathy involves understanding the patient's emotions from the patient's perspective. However, empathy reflects more than just understanding the patient's emotions; it includes cognitive characteristics. Cognitive empathy includes the ability to understand the patient's feelings and communicating to the patient that the health care provider understand what they are feeling (Hojat, Gonnella, Nasca, & Mangione, 2002; Irving & Dickson, 2004; Moscrop, 2001). Grover (2005) further stated empathy is more than just understanding others. It also includes speaking clearly, using appropriate body language and listening to the patient's concerns. Irving and Dickson (2004) stated nonverbal forms of communication such as eye contact, appropriate proxemics, positive facial expressions and tone of voice would improve the way in which health care providers express empathy to a patient.

The ability of the health care provider to empathize with the patient is commonly seen as a desirable attribute for effective interpersonal communication (White, 1997). Research indicates that using empathy in the patient relationship can improve patient outcomes. Hojat et al. (2005) surveyed 106 physicians and found that physicians who scored high on the empathy scale were more likely to demonstrate strong interpersonal communication behaviors, which aided them to understand the patient's concerns and

thus improve the quality of the relationship. Additionally, Goodchild, Skinner, and Parkin (2005) performed a study where they observed dietitians consulting diabetic patients. The results were statistically significant and suggested that diabetic patients perceived the dietitians provided more support when the dietitian consulted them empathically.

Listening

Often overlooked, a key component of communication is listening. Listening to a patient's concerns will help establish a relationship and make the patient feel that the health care provider is empathetic. According to Gadacz (2003), listening is the cornerstone of competent communication. Listening requires the health care provider to give their full attention to the patient. However, all too frequently the health care provider will be thinking about something else, prematurely planning a response while the patient is expressing their concerns, or performing other tasks such as documenting patient complaints instead of devoting their full attention to listening what the patient is trying to say (Reeves, 2005). "Too often individuals are thinking of the next question to ask instead of focusing on the present interaction" (Grover, 2005, p. 178). Allowing the patient to finish expressing their concerns enables the health care provider to accurately respond to the needs of the patient in a productive manner (Reeves, 2005). Comer and Drollinger (1999) defined listening as multilevel; listening may be marginal, evaluative and active. Marginal listening occurs when health care providers physically receive the verbal as well as the nonverbal messages, but is easily distracted and allows their minds to wander. Evaluative listening is when the health care provider is concentrating on what

is being said, assesses the importance of and assigns meaning to the incoming messages (Comer & Drollinger, 1999; Ramsey & Sohi, 1997). Evaluative listeners, however, are not very sensitive in their assessment because they only focus on factual meaning. Third, active listening is a process in which the health care provider receives messages, assesses them and responds to the patient appropriately. Responses serve a dual purpose of assuring the patient that accurate listening has taken place and encourage communication to continue (Comer & Drollinger, 1999; Reeves, 2005). Responses can range from short verbal acknowledgements such as a "yes" or "no" to elaborate questioning and can also include nonverbal responses such as head nods, facial expressions, body language, and comfortable levels of eye contact (Reeves, 2005). A health care provider who practices good active listening skills is likely to understand what the patient said. As a result, the health care provider will give feedback to the patient, allowing them to better provide for the patient needs (Shepherd, 1993).

In summary, communication between the patient and the athletic trainer is an important element of quality medical care. Patient care outcomes have long been viewed as the standard in health care, as they are measured on the patient's perception of how well the health care provider communicates (Conlee, Olvera, & Vagim, 1993). Therefore, in order to effectively care for the patient, communication is at the core of quality health care (Gadacz, 2003; Irving & Dickson, 2004; Sheppard, 1993). There continues to be an interest in developing effective communication behaviors in health care because of its relationship with positive outcomes (Hill, Rolfe, Person, & Heathcote, 1998; Rider et al., 2006; Rider & Keefer, 2006). Effective communication facilitates positive relationships,

promotes teamwork and allows health care providers to successfully respond to a patient's needs (Rider & Keefer, 2006). Improving communication behaviors, as a result of rhetorical sensitivity attitudes, should prove to be beneficial in multiple ways. First, with greater rhetorical sensitivity athletic training students are able to overcome the communication challenges they may face during the patient medical interview. Second, athletic training students may be able to interact, be more involved and be perceived as clinically proficient by the patient. Last, patients may be more satisfied with the kind of care they are getting.

CHAPTER 3

The Methodology

Procedures

The researcher requested approval from the University of Kansas Human Subjects Institutional Review Board to allow the investigation of rhetorical sensitivity and its influence on the patient medical interview. The subjects in the study were athletic training students who were in their final year of an undergraduate accredited athletic training education program. Due to the researcher's location, the solicitations of athletic training students were from seven institutions that are located in the central part of the Midwest.

Upon Institutional Review Board approval, the researcher called the program directors of athletic training education programs to encourage senior athletic training students to participate in the study. To further encourage athletic training student participation, subjects at each institution were entered into a drawing for a gift certificate. Once participants were identified, the researcher scheduled a date and time with the program director when the data could be collected. Prior to participating in the study, the researcher requested permission by giving informed consent forms to each athletic training student.

To study athletic training students' rhetorical sensitivity and the effect it has on the patient medical interview, a standardized patient encounter was used. Standardized patients are lay people who are trained to portray common medical problems (Whelan, McKinley, Boulet, Macrae, & Kamholz, 2001). More than 95% of medical schools use

standardized patients for teaching and assessing clinical skills (Mavis, Ogle, Lovell, & Madden, 2008). Research has shown that standardized patients are highly authentic and can be trained to provide reproducible ratings of communication skills (Gorter, Rethans, Heijde, Scherpbier, Houben, Vleuten, & Linden, 2002; Whelan et al., 2001).

In this study, the patient medical interview consisted of one standardized patient encounter per athletic training student. Athletic training students were instructed to treat the standardized patient as an actual patient, gather important patient information, perform a clinical examination and discuss possible findings. There was no time limit for athletic training students to assess the standardized patient. All simulated patient medical interviews occurred in a private room with only the athletic training student and the standardized patient being present. All patient medical interviews were video recorded and later observed by the researcher to measure the athletic training student's communication behaviors.

Standardized Patient Recruitment

The recruitment of one volunteer standardized patient occurred at the researcher's institution from the Department of Communication Arts. To be eligible, the standardized patient had to be between 18-28 years old, have no previous traumatic injury that resulted in a visible scar or deformity of the ankle, possess good communication and acting skills, be athletic looking and understand the game of soccer. Once the eligible standardized patient was identified, she received an outline on the objectives of the study. As a reward for volunteering, the standardized patient was paid cash and received extra credit in her capstone senior course.

Standardized Patient Training

Prior to conducting the study, the standardized patient received three hours of interactive instruction facilitated by the researcher. The training included an overview of the objectives of the study, rhetorical sensitivity, patient medical interview, certain communication behaviors that may provide a clue to the presence of rhetorical sensitivity, scoring of subjects, discussion of the character profile, and role-playing. The volunteer practiced scenarios similar to the one used in the study to familiarize herself with being a standardized patient. Practice sessions were followed up with further discussion to eliminate confusion.

The Roles of the Standardized Patient

The standardized patient had two important roles. First, the standardized patient was taught to role play a collegiate soccer player who had hurt her right ankle in soccer practice the day before. The standardized patient stated she slid into a tackle and "rolled her ankle" causing moderate pain to the outside of her ankle. Additionally, the standardized patient reported she did not hear or feel a "snap" or "pop" at the time of injury. Immediately after the injury the standardized patient could bear weight on the injured leg and could walk, but could not continue playing because of pain on the lateral aspect of the ankle. Overnight the outside of the ankle and top of the foot became bruised and slightly swollen. The standardized patient walked with a slight limp, had reduced active range of motion and strength in all directions, experienced point tenderness around the lateral malleolus and experienced pain with all movements, especially with inversion and plantar flexion. The standardized patient did not have a history of major medical

problems with her right ankle. Treatment since the injury included: resting, applying compression, elevating the injured ankle, putting cold washcloths over the injured area plus taking small amounts of ibuprofen for pain relief. To further assess the athletic training student's ability to adapt communicatively to the situation, the standardized patient was worried that she would not be allowed to play in a soccer game the next day. The standardized patient did not want to see a doctor because she was afraid that the doctor would rest her and feared that if she was told to rest she might lose her starting spot. The second role of the standardized patient involved her rating her satisfaction with the patient medical interview immediately after it was completed by the athletic training student.

Instrumentation

Two instruments were utilized to measure self-reported rhetorical sensitivity and the athletic training student's performance during the patient medical interview. First, rhetorical sensitivity was measured using The RHETSEN Scale (Hart et al., 1980), which is based on a 5-point Likert scale ranging from "Almost Always True" to "Almost Never True," was completed by the athletic training student. The RHETSEN Scale measures three dimensions: rhetorical sensitivity, noble self and rhetorical reflector. For this study, only rhetorical sensitivity was analyzed. The items on the RHETSEN Scale measuring rhetorical sensitivity consisted of 28 questions and had a coefficient alpha value of .63 (Appendix 3). Published results of The RHETSEN Scale demonstrated a .76 coefficient alpha value (Hart et al., 1980). Scoring the RHETSEN Scale for rhetorical sensitivity was "C = 2, B or D = 1, A or E = 0." The total rhetorical sensitivity score possible was 56,

two points maximum for each item. Although the instrument was scored, there were no absolutely right or absolutely wrong answers. To understand rhetorical sensitivity scores, parameters of high, moderate and low were used. To establish these parameters, the total score possible was split into thirds. Thus, athletic training students' scores can be interpreted as 56 – 37 of the points received are regarded as high, 36 – 18 of the points received are moderate, and scores received below 18 are low.

The patient medical interview was measured using a self-developed 25-question two dimension Patient Medical Interview Scale (Appendix 4). Dimension one consisted of 7 questions that measured the standardized patient's satisfaction with the patient medical interview and was scored using a Likert scale ranging from "Strongly Agree" to "Strongly Disagree." Dimension two consisted of 18 questions that measured the athletic training student's observed effective communication behaviors during the patient medical interview. Questions were scored as either "Good," "Fair" or "Poor." Initially, the Patient Medical Interview Scale coefficient alpha scores were standardized patient satisfaction (.86) and the observed effective communication behaviors at an alpha of .61. To obtain a higher alpha coefficient value an item analysis was conducted on the 18 items that measured the observed effective communication behaviors. Two items: "The ATS asked the SP to explain or show how the ankle injury occurred" and "The ATS actively listened by not taking notes when SP was answering questions or explaining the condition" were similar in content to items "The ATS asked the SP what happened" and "The ATS actively listened using nonverbal techniques (i.e. eye contact)" and perhaps were pulling the coefficient alpha down. Based on the results from the item analysis,

items 11 and 23 were removed from the scale, which transformed the dimension and created a more meaningful survey. As a result, the coefficient alpha value for the corrected observed effective communication behaviors dimension was .66. Due to a desirable alpha coefficient score, items measuring standardized patient satisfaction were not modified. Once desirable alpha coefficient scores were achieved, further statistical analysis of the patient medical interview involved using the 23-item corrected Patient Medical Interview Scale. The total points possible for each dimension of the corrected Patient Medical Interview Scale are standardized patient satisfaction (35) and observed effective communication behaviors (48). To understand the scores for each dimension, athletic training students' scores were interpreted as 90 percent of the points received "exceeded expectations," 80 percent of the points received "met expectations," and any score received below 80 percent "did not meet expectations."

Data Analysis

Once desirable coefficient alpha scores were achieved, descriptive and inferential statistics were analyzed. Descriptive statistics were used to examine the characteristics of the subjects. Additionally, independent sample *t* tests were calculated to examine the differences between select demographics (i.e. gender, previously completing a college level communication course and overall grade point averages), level of self-reported rhetorical sensitivity, standardized patient satisfaction and observed effective communication behaviors. Finally, a bivariate correlation and a multiple linear regression were used to examine the relationship between rhetorical sensitivity and athletic training students successfully performing a patient medical interview.

CHAPTER 4

The Results

Participant Characteristics

This research studied rhetorical sensitivity and its relationship to an athletic training student's ability to perform a successful patient medical interview. The sample consisted of 39 senior athletic training students, 15 of whom were men and 24 were women. Senior athletic training students were recruited because they were at the end of their undergraduate education and more than likely possessed the knowledge and experience to evaluate a standardized patient's injury. Other demographics analyzed include if the participants completed a college level communication course (yes = 32, no = 7) and overall grade point average (4.0 – 3.5 = 21, 3.49 – 3.00 = 14, 2.99 – 2.5 = 3, 2.49 – 2.0 = 1). The participant characteristics are illustrated in Table 1.

Table 1
Participant Characteristics (n = 39)

	n	%
Gender		
Male	15	38
Female	24	62
Communication Course		
Yes	32	82
No	7	18
Overall GPA		
4.0-3.5	21	54
3.4-3.0	14	36
2.9-2.5	3	8
2.4-2.0	1	2

Statistical Analysis of Rhetorical Sensitivity and the Patient Medical Interview

Descriptive Statistics and Independent t Tests of Rhetorical Sensitivity, the Patient Medical Interview and Demographics

Athletic training students' overall descriptive statistics of level of self-reported rhetorical sensitivity and successfully performing a patient medical interview are presented first followed by the descriptive statistics of groups, which are presented in Table 2, Table 3 and Table 4.

Athletic training students' self-reported rhetorical sensitivity scores ranged from 19 – 44 (M = 33.74, SD = 5.42). Based on the parameters of high, moderate and low, athletic training students, on the average, had moderate levels of rhetorical sensitivity skills. The standardized patient satisfaction scores ranged from 17 – 35 (M = 30.67, SD = 4.56) and the observed effective communication behaviors scores ranged from 31 – 48 (M = 39.23, SD = 4.45). Based on the parameters of exceed, meet and does not meet expectations, athletic training students, on the average, met expectations of successfully performing a patient medical interview.

Table 2
Means and Standard Deviations of Rhetorical Sensitivity and the Patient Medical Interview

	M	*SD*
Rhetorical Sensitivity	33.74	5.42
Standardized Patient Satisfaction	30.67	4.56
Observed Communication Behaviors	39.23	4.45

Males' level of self-reported rhetorical sensitivity (M = 33.93, SD = 5.91) was, on the average, slightly higher than females (M = 33.63, SD = 5.22). The independent t test analyzing the relationship between gender and self-reported rhetorical sensitivity ($t(37)$ = .171, p = .865) showed there was not a significant difference between men and women on their rhetorical sensitivity. The standardized patient satisfaction with the male patient medical interview was slightly higher (M = 31.93, SD = 3.65) than for the females (M = 29.88, SD = 4.95). Again, independent t test indicated this difference was not significant ($t(37)$ = 1.39, p = .173). The observed effective communication behaviors for men was also slightly higher (M = 38.60, SD = 4.26) than for women (M = 39.63, SD = 4.61). This difference was also not significant ($t(37)$ = -.695, p = .491).

Table 3
Means and Standard Deviations of Rhetorical Sensitivity and the Patient Medical Interview for Genders

	Men		Women	
	M	*SD*	*M*	*SD*
Rhetorical Sensitivity	33.93	5.91	33.63	5.22
Standardized Patient Satisfaction	31.93	3.65	29.88	4.95
Observed Communication Behaviors	38.60	4.26	39.63	4.61

Additionally, athletic training students who completed a college communication course had slightly lower levels of self-reported rhetorical sensitivity (M = 33.59, SD = 5.89) than athletic training students who did not complete a college communication course (M = 34.43, SD = 2.44). The independent t test analyzing the relationship between self-reported rhetorical sensitivity and athletic training students who completed a college

communication and those who did not showed there was not a significant difference ($t(37) = -.365$, $p = .717$). The standardized patient satisfaction with athletic training students who completed a college communication course ($M = 30.69$, $SD = 4.58$) was lower than athletic training students who did not complete a college communication course ($M = 30.57$, $SD = 4.79$). Again, independent *t* test indicated this difference was not significant ($t(37) = .060$, $p = .952$). The observed effective communication behaviors for athletic training students who completed a college level communication course ($M = 38.50$, $SD = 4.37$) was also lower than for athletic training students who did not complete a college communication course ($M = 42.57$, $SD = 3.31$). Unlike previous independent *t* tests, the observed effective communication behaviors dimension did result in a significant difference ($t(37) = -2.314$, $p = .026$).

Table 4
Means and Standard Deviations of Rhetorical Sensitivity and the Patient Medical Interview for Athletic Training Students Who Completed a College Communication Course

	Course		No Course	
	M	*SD*	*M*	*SD*
Rhetorical Sensitivity	33.59	5.89	34.43	2.44
Standardized Patient Satisfaction	30.69	4.58	30.57	4.79
Observed Communication Behaviors	38.50	4.37	42.57	3.31

Also, levels of self-reported rhetorical sensitivity seemed to increase as overall grade point averages increased (4.0-3.5, $M = 34.43$, $SD = 6.40$; 3.4-3.0, $M = 33.14$, $SD = 4.3$; 2.9-2.5, $M = 33.67$, $SD = 2.08$; 2.4-2.0, $M = 28.00$, $SD = .00$). This data, along with

standardized patient satisfaction and observed effective communication behaviors, were analyzed using independent *t* tests to evaluate if the relationship with overall grade point average was statistically significant. Since athletic training students overall grade point averages primarily fell into two categories, independent *t* tests only occurred to the upper two categories (i.e. 4.0-3.5 and 3.4-3.0.) The independent *t* test for each measured relationship, the level of self-reported rhetorical sensitivity ($t(33) = .658$, $p = .36$), standardized patient satisfaction ($t(33) = .809$, $p = .43$) and observed effective communication behaviors ($t(33) = -.246$, $p = .58$) were not significant.

Bivariate Correlations of Rhetorical Sensitivity and the Patient Medical Interview

Correlation coefficients were computed for rhetorical sensitivity, standardized patient satisfaction and observed communication behavior. The results of the correlation analyses, presented in Table 5, showed that 2 out of 3 correlations were statistically significant. In general, the results suggested that if an athletic training student has high levels of self-reported rhetorical sensitivity they are more likely to communicate more effectively during the patient medical interview (r = .34). Also, students who communicated more effectively tended to make the standardized patient more satisfied with the medical encounter (r = .47).

Table 5
Bivariate Correlations of Rhetorical Sensitivity and the Patient Medical Interview

	Rhetorical Sensitivity	Standardized Patient Satisfaction
Standardized Patient Satisfaction	.12	
Observed Communication Behaviors	.34*	.47**

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Multiple Regression Analysis of Rhetorical Sensitivity and the Patient Medical Interview after Controlling for Demographic Variables

Finally, a multiple regression analysis was conducted to evaluate whether level of self-reported rhetorical sensitivity and observed effective communication behaviors during a patient medical interview predicted standardized patient satisfaction over and above relevant demographic variables. When grouped together, the level of self-reported rhetorical sensitivity and observed effective communication behaviors accounted for a significant proportion of the standardized patient satisfaction variance after controlling for the effects of gender, previously completed a college level communication course and overall grade point average (R^2 change = .26, $F(5,33) = 3.61$, $p < .05$). More specifically, the results indicated that standardized patient satisfaction increased as athletic training students communicated more effectively during the patient medical interview, regardless of demographics (Table 6).

Table 6
The Unstandardized Beta of the Predictors with Standardized Patient Satisfaction

	Unstandardized Beta
Rhetorical Sensitivity	-.08
Observed Communication Behaviors	.55**
Gender	-2.68
Completed Communication Course	-1.30
Grade Point Average	-1.20

**. Correlation is significant at the 0.01 level.

In summary, overall athletic training students' had moderate levels of rhetorical sensitivity and met expectations in regards to successfully performing a patient medical interview. Furthermore, the results indicated that differences in participant characteristics did not contribute significantly to an athletic training student being more rhetorical sensitive or performing a patient medical interview more successfully. Correlations indicated that athletic training students who possessed higher levels of rhetorical sensitivity, regardless of demographics, are more likely to communicate effectively during a patient medical interview. Also, correlations showed that athletic training students who communicated effectively during the patient medical interview made the standardized patient more satisfied. Based on these results, rhetorical sensitivity measures appear to offer some predictability for athletic training students' performance during a patient medical interview.

CHAPTER 5

The Final Comments

Discussion

The purpose of this dissertation was twofold. The first goal was to investigate whether the self-reported rhetorical sensitivity of athletic training students is positively related to successfully performing a patient medical interview. In practical terms, this study is designed to determine if athletic training students' self-reported communication behaviors influence patient satisfaction and is related to their ability to communicate effectively when evaluating an injury. A secondary goal is to use the results to explore the implications for future athletic training student communication skills instruction. The rhetorical sensitivity theory states that people who are more consciously aware of their communication behaviors can effectively adapt their communication style according to the situation (Motley, 1992). In other words, rhetorical sensitivity makes the production of effective communication easier. Much of the investigation of rhetorical sensitivity and its effect on communication have been applied to fields other than health care. In fact, a literature search revealed that no health care communication studies specifically focused on rhetorical sensitivity and its effect on communication behaviors during a patient medical interview.

The present study found that this sample of athletic training students had moderate levels of self-reported rhetorical sensitivity and met expectations of successfully performing a patient medical interview. The findings demonstrated a statistically significant correlation between self-reported rhetorical sensitivity and

observed effective communication behaviors during a patient medical interview. Although the results indicated a relationship, rhetorical sensitivity only accounted for a small portion of the variance, however. A recent study examining the link between rhetorical sensitivity and communication behaviors found similar results. Dilbeck and McCroskey (2008) reported a small, but significant, relationship existed between the overall construct of rhetorical sensitivity and self-reported communication competence. Although the current study did not reveal a large relationship, perhaps the relationship can be attributed to the idea that rhetorical sensitivity is inherently consistent with effective communication behaviors. For instance, a rhetorically sensitive communicator avoids rigid communication patterns, is aware of the needs of self and others, and recognizes that ideas and feelings can be communicated in different ways in any given situation making effective communication possible (Spano & Zimmerman, 1995).

The results of the present study did not point toward a significant correlation between self-reported rhetorical sensitivity and standardized patient satisfaction. However, when self-reported rhetorical sensitivity and observed effective communication behaviors were analyzed together, they explained a significant proportion of the standardized patient satisfaction ratings, after controlling for athletic training students' demographics. One plausible explanation for these findings can be attributed to the standardized patient being more concerned with the outcome of the patient medical interview as opposed to the interaction. As a result, the standardized patient did not focus on the athletic training student's distinct visual and auditory communication behaviors. Also, the nature of the patient medical interview may have attributed to these results.

Athletic training students' communication behaviors were examined during a single patient medical interview using a standardized patient they had never met before. Because a majority of real-life patients may make repeat visits to an athletic trainer, the ongoing relationship might direct how they rate the health care provider-patient interaction. Often in short-term relationships individuals display more rhetorical reflection type of communication behaviors to collect information upon which to build rhetorical sensitivity communication behaviors (Knutson & Posirisuk, 2006). Yet, in longer-term relationships individuals tend to display higher levels of rhetorical sensitivity communication behaviors (Knutson & Posirisuk, 2006).

The demographics of athletic training students did not influence the level of self-reported rhetorical sensitivity or to a large extent affect the outcome of the patient medical interview. Analysis of gender differences revealed that males had a slightly higher level of self-reported rhetorical sensitivity and more observed effective communication behaviors than females. However, there was not a significant difference between gender and self-reported rhetorical sensitivity or gender and an athletic training students' communication performance during the patient medical interview. Perhaps, the lack of significant differences in gender could be attributed to a social desirability bias or the rater's communicative expectations of male and female athletic training students. The raters may have thought athletic training students should be similarly competent in their communication skills, thus having a preconceived perception that influenced the rating patterns. A comparable study by Koermer and Kilbane (2008) had patients think of their most recent visit with a medical doctor and rate the doctor's communication

behaviors based that encounter. They indicated there was not a significant interaction with sociality (courteous expressions and personal connection) communication patterns and doctor gender in the prediction of patient satisfaction. Also, House, Dallinger, and Kilgallen (1998) stated rhetorically sensitive communicators tend to be non-differentiated in gender role. Despite no significant difference in athletic training student gender communication performance, however, the standardized patient was more satisfied with athletic training students who used effective communication behaviors.

The results also indicated that an athletic training student who previously completed a college communication course did not produce higher levels of self-reported rhetorical sensitivity, improve standardized patient satisfaction ratings or increase the occurrences of observed effective communication behaviors during the patient medical interview. A possible reason for these outcomes is that the communication course the athletic training students took was not discipline specific. Although basic communication training should not be discouraged, a course or a curriculum that focuses on medical communication can facilitate the athletic training student to be more knowledgeable of various communication behaviors and properly use those behaviors while interacting with a patient. For example, Legg, Young, and Bryer (2005) reported that medical students who received medical communication training significantly improved their overall ability to initiate a patient session, gather information, and build rapport when obtaining a patient's case history.

Finally, evaluation of overall grade point average produced no significant correlations with increased level of self-reported rhetorical sensitivity, standardized

patient satisfaction or observed effective communication behaviors. A possible answer for these outcomes can be traced back to how athletic training students recorded their grade point average. Athletic training students were asked to report their grade point average according to pre-determined categories. As result, grade point averages tended to be grouped into one category, creating data with no variation. Future studies should ask for discrete grade point averages to improve differences among athletic training students.

In summary, the results of this study suggested that rhetorical sensitivity did contribute to an athletic training student successfully performing a patient medical interview. The study showed that a self-reported rhetorical sensitivity is related to higher ratings of observed effective communication behaviors. In turn, higher ratings of observed effective communication behaviors resulted in the standardized patient being more satisfied. Therefore, the results increase the likelihood of developing and implicating communication skills training across all athletic training education programs.

Implications

Communication is an important aspect of practice that healthcare professionals have to master (Roberts & Bucksey, 2007). In most situations, athletic trainers spend more time communicating with patients than performing hands-on technical-skill behaviors. This is important, because this study has provided evidence that standardized patients welcome the utilization of effective communication behaviors by athletic training students. Therefore, the results of this study have practical implications for athletic training educators interested in the development of effective communication practices.

Curricula that focus on the practice of effective communication behaviors in addition to quality assessment methods can help athletic training students expand and improve their communication behaviors. Also, as accreditation competencies and proficiencies continue to evolve, a curriculum that teaches and evaluates communication skills provides evidence that accreditation standards are being met.

As athletic training students eventually enter into the work force, they will need to be competent communicators. For example, good communication is critical during emergency situations. In an emergency, effective communication can mean the difference between life and death or permanent disability (Courson & Henry, 2005). Also, athletic trainers who have well-developed communication skills are more likely to gain the trust of the patient and engage the patient in discussions about their fears and personal situations that are related to the injury. The relationship built as a result of the trust between the athletic trainer and patient will almost certainly have a positive impact on the recovery process (Anderson, 2000). Thus, including communication training early and often in a curriculum equips athletic training students with the necessary communication skills to successfully interact with all patients in all situations.

To elaborate further, communication training should start with simple basic skills and then gradually focus more on medical communication. Communication training that centers on role-playing with peers or even simulated patients provides an environment that mimics real-life patient scenarios that can improve overall rhetorical sensitivity skills. Communication training should not be limited to one course, but continued throughout the whole curriculum. Communication training allows educators to identify

students with specific communicative problems and provide remediation when needed. Communication training that is embedded into the curriculum allows athletic training students to see firsthand the importance that effective communication behaviors are to successful health care outcomes.

Limitations

As with any empirical research, this study had its share of limitations, such as the quality of the room where the patient medical interviews were undertaken and the enthusiasm of the athletic training student. For example, in some instances the program director made available a classroom and a desk to conduct the patient medical interview and not an examination table in a clinical patient setting. Also, in this study only a minor ankle injury was examined. Although this does not detract from the significance of the relationships observed, it does call attention to that more complicated injuries dealing with multiple areas of the body and the patient's emotions associated with those injuries may be necessary to effectively assess athletic training students' communication behaviors. Furthermore, the injury acted out by the standardized patient was not a real-life situation. While the standardized patient did practice the scenario multiple times to perfect the injury as much as possible, one cannot fully replicate a real-life injury. Combining these limitations with the fact that the incentive of performing a successful patient medical interview was not necessarily important to the student may have led athletic training students to not be as motivated as they would have been in real-life patient situation. When scoring the patient medical interview, the reliability of the standardized patient may have played a role in the outcome. Unlike the researcher who

had the opportunity to replay the video when measuring the athletic training student's communication behaviors, the standardized patient had to rely on her memory to rate her satisfaction with the patient medical interview. Finally, the small number of athletic training education programs in the vicinity of the researcher coupled with the low number of senior athletic training students in each program prevented large amounts of data collection for comparison.

Recommendations

For future research with this topic, the researcher would suggest not to limit the study to a particular geographic area or participant background. Expanding the study to collect data from athletic training students in different parts of the country, at various grade levels, certified and non-certified, and representing various demographic backgrounds would present a more diverse group of participants. A diverse set of subjects would provide a better sense of athletic training students' level of communication skills as a whole and provide information about curricular strengths and weaknesses. Also, data collection could occur in a setting using real-life patients instead of a standardized patient. Data collection in a real-life setting would improve the athletic training student's motivation and seriousness, plus provide a greater range of injuries they have to manage and adjust their communication behaviors. Future research may examine verbal and nonverbal communication skills separately and the relationship those skills have with patient medical interview outcomes. Potentially, research could involve investigating other health care professions models for communication training. As a result, guidelines could be established and recommendations made for implementing

communication training in all athletic training education programs. Thus, future research could look at patient outcomes in relation to athletic training students who have received communication training as part of the curriculum. This may provide an opportunity to validate the findings of this study and justify further development of communication skills both for students and for certified athletic trainers in practice.

Conclusions

Although increased levels of rhetorical sensitivity did not directly reflect increased standardized patient satisfaction ratings, this study did demonstrate a relationship between rhetorical sensitivity and effective communication behaviors during the patient medical interview. Subsequently, athletic training students who were more sensitive to their own communication abilities communicated more effectively with the standardized patient. Therefore, one could argue that rhetorical sensitivity as a communication strategy proved to be a valuable method to produce an overall successful patient medical interview. This study confirmed that the instruction of effective communication behaviors, with or without rhetorical sensitivity communication strategies, increases the chances of successfully performing a patient medical interview among athletic training students. Moreover, effective communication behaviors can lead a standardized patient to report being more satisfied with her patient care, which can be related to a real-life situation. These findings should be considered by athletic training educators who design curricula and assess student skills. This research indicated that attention to communication training on the part of athletic training educators is very important, because athletic training students may not be aware that effective

communication behaviors are equally, if not more, important to the patient than hands-on technical skills. Because educators commonly pay attention to more hands-on technical skills than the use of effective communication behaviors, these results provide a reason to teach effective communication behaviors to athletic training students.

References

Anderson, M.B. (2000). Supervision of athletic trainers' counseling encounters. *Athletic Therapy Today*, 5(13), 46-47.

Anderson T., Ogles, B.M., & Weis, A. (1999). Creative use of interpersonal skills in building a therapeutic alliance. *Journal of Constructivist Psychology*, 12, 313-330.

Blanquicett, C., Amsbary, J.H., Mills, C., & Powell, L. (2007). Examining the perceptions of doctor-patient communication. *Human Communication*, 10(4), 421-435.

Bostic, J. (2008, November). Up for the challenge: College/university setting faces emerging issues. *NATA News*, 10-12.

Cegala, D.J. (1997). A study of doctors' and patients' communication during a primary care consultation: Implications for communication training. *Journal of Health Communication*, 2, 169-194.

Cegala, D.J., Coleman, M.T., & Tuner, J.W. (1998). The development and partial assessment of medical communication competence scale. *Health Communication*, 10(3), 261-288.

Cegala, D.J., Gade, C. Broz, S.L., & McClure, L. (2004). Physicians' and patients' perceptions of patients' communication competence in a primary care medical interview. *Health Communication*, 16(3), 289-304.

Cegala, D.J., McGee, D.S., & McNeilis, K.S. (1996). Components of patients' and doctor's perceptions of communication competence during a primary care medical interview. *Health Communication*, 8(1), 1-27.

Comer, L., & Drollinger, T. (1999). Active empathetic listening and selling success: A conceptual framework. *The Journal of Personal Selling & Sales Management*, 19, 15-30.

Conlee, C.J., Olvera, J., & Vagim, N.N. (1993). The relationship among physician nonverbal immediacy and measures of patient satisfaction with physician care. *Communication Reports*, 6(1), 25-33.

Courson, R., & Henry, G.R. (2005). Communication: The critical element in emergency preparation. *Athletic Therapy Today*, 10920, 16-18.

Devito, J.A. (5th ed.). (2002). *Messages: Building interpersonal communication skills*. Boston, MA: Allyn and Bacon.

Diaz-Duque, O.F. (1989). Communication barriers in medical settings: Hispanics in the United States. *International Journal of the Sociology of Language*, 79, 93-102.

Dilbeck, K.E., & McCroskey, J.C. (2009). Socio-communicative orientation, communication competence, and rhetorical sensitivity. *Human Communication*, 12(3), 255-266.

Duran, R.L. (1983). Communicative adaptability: A measure of social communicative competence. *Communication Quarterly*, 31, 320-326.

Duran, R. L., & Spitzberg, B.H. (1995). Toward the development and validation of a measure of cognitive communication competence. *Communication Quarterly*, 43(3), 259-275.

Eckman, P. (1993). Facial expressions and emotion. *American Psychologist*, 48(4), 384-392.

Essential elements of communication in medical encounters: The Kalamazoo consensus statements. (2001, April). *Academic Medicine*, 76(4), 390-393.

Evans, B.J., Stanley, R.O., & Burrows, G.D. (1992). Communication skills training and patients' satisfaction. *Health Communication*, 4(2), 155-170.

Ezner, I., Robinson, J., Pearson, M., Barton, S., & Walley, T. (2003). A reliability study of instrument for measuring general practitioner consultation skills: The LIV-MAAS scale. *International Journal for Quality in Health Care*, 15(5), 407-412.

Finch, L.P. (2004). Understanding patients' lived experiences: The relationship of rhetoric and hermeneutics. *Nursing Philosophy*, 5, 251-257.

Frankel, R.M., & Stein, T. (1999). Getting the most of the clinical encounter: The four habits model. *The Permanente Journal*, 3(3), 79-88.

Gadacz, T.R. (2003). A changing culture in interpersonal and communication skills. *The American Surgeon*, 69, 453-458.

Goodchild, C.E., Skinner, T.C., & Parkin, T. (2005). The value of empathy in dietetic consultations. A pilot study to investigate its effect on satisfaction, autonomy and agreement. *Journal of Human Nutrition and Dietetics*, 18, 181-185.

Gorter, S., Rethans, J., Heijde, D., Scherpbier, A., Houben, H., Vleuten, C., & Linden, S. (2002). Reproducibility of clinical performance assessment in practice using incognito standardized patients. *Medical Education*, 36(9), 827-832.

Grant, C.H., Cissna, K.N., & Rosenfeld, L.B. (2000). Patients' perceptions of physicians communication and outcomes of the accrual to trial process. *Health Communication*, 12(1), 23-39.

Grover, S. M. (2005). Shaping effective communication skills and therapeutic relationships at work. *The American Association of Occupational Health Nurses Journal*, 53(4), 177-182.

Hart, R.P., & Burks, D.M. (1972). Rhetorical sensitivity and social interaction. *Speech Monographs*, 39(2), 75-91.

Hart, R.P., Carlson, R.E., & Eadie, W.F. (1980). Attitudes toward communication and the assessment of rhetorical sensitivity. *Communication Monographs*, 47, 1-22.

Hart, R. P., Eadie, W.F., & Carlson, R.E. (1975, December). *Rhetorical sensitivity and communication competence*. Paper presented at the annual meeting of the Speech Communication Association, Houston, TX.

Haskard, K.B., Williams, S.L., DiMatteo, R.M., Heritage, J., & Rosenthal, R. (2007). The provider's voice: patient satisfaction and the content filtered speech of nurses and physician as in primary medical care. *Journal of Nonverbal Behavior*, 32, 1-20.

Hawken, L., Duran, R.L. & Kelly, L. (1991). The relationship of interpersonal communication variables to academic success and persistence in college. *Communication Quarterly*, 39(4), 297-308.

Hill, J., Rolfe, I.E., Pearson, S.A., & Heathcote, A. (1998). Do junior doctors feel they are prepared for hospital practice? A study of graduates from traditional and non-traditional medical schools. *Medical Education*, 32, 19-24.

Horsfall, Jan. (1998). Structural impediments to effective communication. *Australian and New Zealand Journal of Mental health Nursing*, 7, 74-80.

Hojat, M., Gonnella, J.S., Nasca. T.J., & Mangione, S. (2002). Physician empathy: Definition, components, measurement, and relationship to gender and specialty. *The American Journal of Psychiatry*, 159(9), 1563-1569.

Hojat, M., Mangione, S, Nasca. T.J., Gonnella, J.S., & Magee, M. (2005). Empathy scores in medical school and ratings empathic behavior in residency training 3 years later. *The Journal of Social Psychology*, 145(6), 663-672.

House, A., Dallinger, J.M., & Kilgallen, D.L. (1998). Androgyny and rhetorical sensitivity: The connection of gender and communicator style. *Communication Reports*, 11(1), 11-20.

Hullman, G.A., & Daily, M. (2008). Evaluating physician communication competence scales: A replication and extension. *Communication Research Reports*, 25(4), 316-322.

Irving, P., & Dickson, D. (2004). Empathy: Towards a conceptual framework for health professionals. *International Journal of Health Care Quality Assurance*, 17(4), 212-220.

Jette, D.U., Bertoni, A., Coots, R. Johnson, H., McLaughlin, C., & Weisbach, C. (2007). Clinical instructors perceptions of behaviors that comprise entry-level clinical performance in physical therapist students: A qualitative study. *Physical Therapy*, 87(7), 833-843

Jones, A. (1994). What interpersonal skills? *British Journal of Nursing*, 3(19), 992-995.

King, D.W. (1991). Just can't find the words: How expression is achieved. *Philosophy and Rhetoric*, 24(1), 54-72.

Knutson, T.J, & Posirisuk, S. (2006). Thai relational development and rhetorical sensitivity as potential contributors to intercultural communication effectiveness: Jai yen yen. *Journal of Intercultural Communication Research*, 35(3), 205-217.

Koermer, C.D., & Kilbane, M. (2008). Physician sociality communication and its effect on patient satisfaction. *Communication Quarterly*, 56(1), 69-86.

Koplan, J. P. (2003). Communication during public health emergencies. *Journal of Health Communication*, 8, 144-145.

Krivanek, P.S. (2000). *How then shall we live? Values for interpersonal communication*. New York, NY: McGraw-Hill Publishing.

Kurtz, S., Silverman, J., Benson, J., Draper, J. (2003). Marrying content and process in clinical method teaching: Enhancing the Calgary-Cambridge Guides. *Academic Medicine*, 78(8), 802-809.

Legg, C., Young, L., & Bryer, A. (2005). Training sixth-year medical students in obtaining case-history information from with aphasia. *Aphasiology*, 19(5), 559-575.

Lein, C., & Wills, C.E. (2007). Using patient-centered interviewing skills to manage complex patient encounters in primary care. *Journal of the American Academy of Nurse Practitioners*, 19, 215-220.

Lepper, H.S., Martin, L.R., & DiMatteo, R.M. (1995). A model of nonverbal exchange in physician-patient expectations for patient involvement. *Journal of Nonverbal Behavior*, 19(4), 207-222.

Mavis, B.E., Ogle, K.S., Lovell, K.L., & Madden, L.M. (2002). Medical students as standardized patients to assess interviewing skills for pain evaluation. *Medical Education*, 36(2), 135-140.

Markova, T., & Broome, B. (2007). Effective communication and delivery of culturally competent health care. *Urologic Nursing*, 27(3), 239-242.

McCroskey, J.C., Booth-Butterfield, S., & Payne, S.K. (1989). The impact of communication apprehension on college student retention and success. *Communication Quarterly*, 37(2), 100-107.

Morrison, P., & Burnard, P. (1989). Students' and trained nurses' perceptions of their own interpersonal skills: A report and comparison. *Journal of Advanced Nursing*, 14, 321-329.

Moore, L.A. (2006). Empathy: A clinician's perspective. The ASHA Leader, Retrieved May 23, 2008, from http://www.asha.org/about/publications/leader-online/archives/2006/060815/f060815e.htm

Moscrop, A. (2001). Empathy: A lost meaning? *Western Journal of Medicine*, 175(1), 59-60.

Motley, M.T. (1992). Mindfulness in solving communicators' dilemmas. *Communication Monographs*, 59, 306-314.

Naylor, A. (2007). Harnessing the power of nonverbal communication. *Athletic Therapy Today*, 12(4), 26-27.

Nishizawa, Y., Saito, M., Ogura, N., Kudo, S., Saito, K., & Hanaya, M. (2006). The non-verbal communication skills of nursing students: Analysis of interpersonal behavior using videotaped recordings in a 5-minute interaction with a simulated patient. *Japan Journal of Nursing Science*, 3, 15-22.

O'Keefe, M. (2001). Should parents assess the interpersonal skills of doctors who treat their children? A literature review. *Journal of Paediatric Child Health*, 37, 531-538.

Pfeiffer, C., Madray, H., Ardolino, A., & Willms, J. (1998). The rise and fall of students' skill in obtaining a medical history. *Medical Education*, 32, 283-288.

Prentice, W.E. (2009). *Arnheim's principles of athletic training: A competency-based approach*. New York, NY: McGraw-Hill Companies, Inc.

Preston, P. (2005). Nonverbal communication: Do you really say what you mean? *Journal of Healthcare Management*, 50(2), 83-86.

Rahman, A. (2000). Initial assessment of communication skills of intern doctors in history-taking. *Medical Teacher*, 22(2), 184-188.

Ramsey, R.P., & Sohi, R.S. (1997). Listening to your customers: The impact of perceived salesperson listening behavior on relationship outcomes. *Journal of the Academy of Marketing Sciences,* 25, 127-137.

Reeves, A. (2005). Emotional intelligence: Recognizing and regulating emotions. *The American Association of Occupational Health Nurses Journal*, 53(4), 172-176.

Richmond, V. P., Smith, R. S., Heisel, A. D., & McCroskey, J. C. (2002). The association of physician socio-communicative style with physician credibility and patient satisfaction. *Communication Research Reports*, 19, 207–215.

Rider, E.A., Hinrichs, M.M., & Lown, B.A. (2006). A model for communication skills assessment across the undergraduate curriculum. *Medical Teacher*, 28(5), 127-134.

Rider, E.A., & Keefer, C.H. (2006). Communication skills competencies: Definitions and a teaching toolbox. *Medical Education*, 40, 624-629.

Rhoades, D.R., McFarland, K., Finch, W.H., and Johnson, A.O. (2001). Speaking and interruptions during primary care office visits. *Family Medicine*, 33, 528-532.

Roberts, L., & Bucksey, S.J. (2007). Communicating with patients: What happens in practice? *Physical Therapy*, 87(5), 586-594.

Robinson, J.D., & Stivers, T. (2001). Achieving activity transitions in physician-patient encounters: From history taking to physical examination. *Human communication Research*, 27(2), 253-298.

Rubin, R.B., Graham, E.E., & Mignerey, J.T. (1990). A longitudinal study of college students' communication competence. *Communication Education*, 39, 1-14.

Scherz, J.W., Edwards, H.T., & Kallail, K.J. (1995). Communicative effectiveness of doctor-patient interactions. Health Communication, 7(2), 163-177.

Schirmer, J.M., Mauksch, L., Lang, F., Marvel, M.K., Zoppi, K., Epstein, R.M., Brock, D., & Pryzbylski, M. (2005). Assessing communication competence: A review of current tools. *Medical Student Education*, 37, 184-192.

Shaikh, A., Knoblock, L.M., & Stiles, W.B. (2001). The use of verbal response mode coding system in determining patient and physician roles in medical interviews. *Health Communication*, 13(1), 49-60.

Sharf, B.F. (1990). Physician-patient communication as interpersonal rhetoric: A narrative approach. *Health Communication*, 2(4), 217-231.

Sheppard, M. (1993). Client satisfaction, extended intervention and interpersonal skills in community mental health. *Journal of Advanced Nursing*, 18, 246-259.

Simmons, M. (1998). *A sociolinguistic analysis of doctor-patient communication*. (Report No. FL 025-586). Aizuwakamatsu City, Fukushima, Japan: The Japan Conference on English for Specific Purposes Proceedings. (ERIC Documents Reproduction Service No. ED 424-785)

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30(4), 526-537.

Spano, S., & Zimmermann, S. (1995). Interpersonal communication competence in context: Assessing performance in the selection interview. *Communication Reports*, 8(1), 18-26.

Spitzberg, B. H. (1983). Communication competence as knowledge, skill, and impression. *Communication Education*, 32, 323-329.

Spitzberg, B.H., Brookshire, R.G., & Bruner, C. (1990). The factorial domain of interpersonal skills. *Social Behavior and Personality*, 18(1), 137-150.

Spitzberg, B.H., & Cupach, W.R. (1984). *Interpersonal communication competence*. Beverly Hills, CA: Sage.

Tan, K.P., Meredith, P., & McKenna, K. (2004). Predictors of occupational therapy students' clinical performance: An exploratory study. *Australian Occupational Therapy Journal*, 51, 25-33.

Tamburrino, M.B., Lynch, D.J., Nagel, R., & Mangen, M. (1993). Evaluating empathy in interviewing: Comparing self-report with actual behaviour. *Teaching and Learning in Medicine*, 5(4), 217-220.

Tamparo, C.T. & Lindh, W. Q. (2nd ed.). (2000). *Therapeutic communications for health professionals*. Clifton Park, NY: Thomson Delmar Learning.

Tan, K.P., Meredith, P., & McKenna, K. (2004). Predictors of occupational therapy students' clinical performance: An exploratory study. *Australian Occupational Therapy Journal*, 51, 25-33.

Tasso, K.H., & Behar-Horenstein, L.S. (2008). Attributes of patient-physician interactions in a teaching hospital. *Hospital Topics: Research and Perspectives on Healthcare*, 86(1), 21-28.

Voices from the past: How the NATA and athletic training grew. (2006, February). *NATA News*, 12-15.

Weidner, T.G., & Henning, J.M. (2002). Being an effective athletic training clinical instructor. *Athletic Therapy Today*, 7(5), 6-11.

Whelan, G.P., McKinley, D.W., Boulet, J.R., Macrae, J., & Kamholz, S. (2001). Validation of the doctor-patient communication component of the Educational Commission for Foreign Medical Graduates Clinical Skills Assessment. *Medical Education*, 35(8), 757-761.

Whelan, G.P. (1999). Educational commission for foreign medical graduates: Clinical skills assessment prototype. *Medical Teacher*, 21(2), 156-160.

White, S.J. (1997). Empathy: A literature review and concept analysis. *Journal of Clinical Nursing*, 6, 253-257.

Wiese, D.M., Weiss, M.R., & Yukelson, D.P. (1991). Sport psychology in the athletic training room: A survey of athletic trainers. *The Sport Psychologist*, 5, 15-24.

Wilson, S.R., & Sabee, C.M. (2003). Explicating communicative competence as a theoretical term. In J.O. Green & B.R. Burleson (Eds.), *Handbook of Communication and Social Interaction Skills* (pp. 3-50). Mahwah, NJ: Lawrence Erlbaum.

Zanten, M.V., Boulet, J.R., & McKinley, D. (2007). Using standardized patients to assess the interpersonal skills of physicians: Six years' experience with a high-stakes certification examination. *Health Communication*, 22(3), 195-205.

Zhang, Z., Luk, W., Arthur, D., & Wong, T. (2001). Nursing competencies: Personal characteristics contributing to effective nursing performance. *Journal of Advanced Nursing*, 33(4), 467-474.

Appendix 1:

Kansas University
Human Subjects Approval

KU RESEARCH & GRADUATE STUDIES
The University of Kansas

1/25/10
HSCL #18423

Thomas Bertoncino
8710 N. Sheldon Court
Kansas City, MO 64153

The Human Subjects Committee, Lawrence Campus (HSCL) has received your response to its expedited review of your research project

18423 Bertoncino/Wolf-Wendel (ELPS) Linking Rhetorical Sensitivity with the Ability of an Athletic Training Student to Successfully Perform a Patient Medical Interview

and approved this project under the expedited procedure provided in 45 CFR 46.110 (f) (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Since your research presents no risk to participants and involves no procedures for which written consent is normally required outside of the research context HSCL may waive the requirement for a signed consent form (45 CFR 46.117 (c) (2). Your information statement meets HSCL requirements. The Office for Human Research Protections requires that your information statement must include the note of HSCL approval and expiration date, which has been entered on the form sent back to you with this approval.

1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at http://www.rcr.ku.edu/hscl/hsp_tutorial/000.shtml.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding which requests an annual update approval, you must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Jan Butin
Associate Coordinator
Human Subjects Committee Lawrence

cc: Lisa Wolf-Wendel

Human Subjects Committee Lawrence
Youngberg Hall | 2385 Irving Hill Road | Lawrence, KS 66045 | (785) 864-7429 | Fax (785) 864-5049 | www.rcr.ku.edu/hscl

Appendix 2:

Informed Consent Form

CONSENT & AUTHORIZATION FORM

INTRODUCTION AND PURPOSE OF THE STUDY
The primary purpose of this study is to investigate whether the self-reported rhetorical sensitivity demonstrated by athletic training students' is positively related to successfully performing a patient medical interview. A secondary purpose is to use the results to discuss the implications for future athletic training student communication skills instruction.

PROCEDURES
The questionnaire and performing a patient medical interview on a standardized patient takes approximately 20 minutes to complete. If you do not agree to participate, then select "no" below.

BENEFITS
This study provides a framework from which communication skills can be taught across athletic training education programs. Secondly, this study can provide a standardized method for the assessment of communication skills during clinical assignments.

RISKS AND PAYMENT TO PARTICIPANTS
There are no risks anticipated and no financial compensation for participation.

PARTICIPANT CONFIDENTIALITY
The questionnaire and the patient medical interview are anonymous and confidential. Your individual responses will not be shared and you will not be asked to identify yourself by name or email address.

REFUSAL TO SIGN CONSENT AND AUTHORIZATION
You are not required to sign this consent and authorization form and you may decline to do so without affecting your outcome with your educational studies. If you decline to select "yes" below, your work will not be included in the overall analysis done for this study. You may withdraw your consent to participate in this study at any time.

QUESTIONS ABOUT PROCEDURES SHOULD BE DIRECTED TO THE RESEARCHER:

Tom Bertoncino	Dr. Lisa Wolf-Wendel
Doctoral Student	Faculty Advisor, Educational Leadership and Policy Studies
University of Kansas	University of Kansas
bertoncino@yahoo.com	Lawrence, KS 66045
(816) 880-9402	(785) 864-9722

PARTICIPANT CERTIFICATION
I have read this consent and authorization form. I have had the opportunity to ask, and I have received answers to any questions I had regarding the study and the use and

disclosure of information about me for the study. I understand that if I have any additional questions about my rights as a research participant, I may call (785) 864-7429 or (785) 864-7385 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email mdenning@ku.edu.

I agree to take part in this study as a research participant. I further agree to the uses and disclosures of my information as described above. By selecting "yes" below, I affirm that I am at least 18 years old and that I have read and understand this consent and authorization form.

___Yes (I agree to participate in the study)

___No (I do not wish to participate in the study)

Appendix 3:

The RHETSEN Scale
Items Measuring Rhetorical Sensitivity

The RHETSEN Scale

Instructions: Listed below are a number of statements to which the researcher would like your reactions. Please respond to each statement individually and be assured that there are no absolutely right or absolutely wrong answers. For each statement, please indicate your opinion by choosing one of the following: A = almost always true; B = frequently true; C = sometimes true; D = infrequently true; E = almost never true.

1. People should be frank and spontaneous in conversation.	A	B	C	D	E
2. When talking with someone with whom you disagree, you should feel obligated to state your opinion.	A	B	C	D	E
3. A person should laugh at an unfunny joke just to please the joke-teller.	A	B	C	D	E
4. It's good to follow the rule: before blowing our top at someone, sleep on the problem.	A	B	C	D	E
5. It is best to hide one's true feelings in order to avoid hurting others.	A	B	C	D	E
6. One should keep quiet rather than say something which will alienate others.	A	B	C	D	E
7. It is acceptable to discuss religion with a stranger.	A	B	C	D	E
8. A person should tell it like it is.	A	B	C	D	E
9. You should tell friends if you think they are making a mistake.	A	B	C	D	E
10. The first thing that comes to mind is the best thing to say.	A	B	C	D	E

11. When conversing, you should tell others what they want to hear.	A	B	C	D	E
12. When someone dominates the conversation, it's important to interrupt them to order to state your opinion.	A	B	C	D	E
13. When angry, a person should say nothing rather than say something he or she will be sorry for later.	A	B	C	D	E
14. When someone has an irritating habit, he or she should be told about it.	A	B	C	D	E
15. When talking to our friends, you should adjust your remarks to suit them.	A	B	C	D	E
16. You really can't put sugar coating on bad news.	A	B	C	D	E
17. You shouldn't make a scene in a restaurant by arguing with a waiter.	A	B	C	D	E
18. A friend who has bad breath should be told about it.	A	B	C	D	E
19. If you're sure you're right, you should argue with a person who disagrees with you.	A	B	C	D	E
20. If people would open up to each other the world would be better off.	A	B	C	D	E
21. You should tell people if you think they are about to embarrass themselves.	A	B	C	D	E
22. You should not be afraid to voice his or her opinion.	A	B	C	D	E

23. You should tell someone if you think they are giving you bad advice.	A	B	C	D	E
24. Saying what you think is a sign of friendship.	A	B	C	D	E
25. When you're sure you're right, you should press your point until you win the argument.	A	B	C	D	E
26. If a man cheats on his wife, he should tell her.	A	B	C	D	E
27. It is better to speak your gut feelings than to beat around the bush.	A	B	C	D	E
28. We should have a kind word for the people we meet in life.	A	B	C	D	E

Athletic Training Student's Demographics

Instructions: Please place an "X" on the line that best represents your demographics.

1. GENDER
   ___Male
   ___Female

2. Have you completed a college-level communication studies course?
   ___Yes
   ___No

3. Mark the appropriate range that represents your overall GPA?
   ___3.5 – 4.0
   ___3.00 – 3.49
   ___2.5 – 2.99
   ___2.0 – 2.49

Congratulations! You are now finished with the questionnaire.
Thank you very much for your time and participation.

Appendix 4:

Patient Medical Interview Scale

Patient Medical Interview Scale

Standardized Patient Satisfaction

Standardized Patient Instructions: The following questions are based on a 5-point Likert scale with "Strongly Agree (SA) = 5, Agree (A) = 4, Neither Agree Nor Disagree (AD) = 3, Disagree (DA) = 2, and Strongly Disagree (SD) = 1". Circle the number to the right of each statement that best applies.

	SA	A	AD	DA	SD
1. The athletic training student did a good job of establishing a personal relationship.	5	4	3	2	1
2. The athletic training student did a good job of being warm and friendly.	5	4	3	2	1
3. The athletic training student did a good job of showing compassion with my injury and game playing situation.	5	4	3	2	1
4. The athletic training student did a good job of explaining my medical problem.	5	4	3	2	1
5. The athletic training student gave diagnostic information in a way that I could understand.	5	4	3	2	1
6. The athletic training student provided treatment information in a way that I could understand.	5	4	3	2	1
7. The athletic training student did a good job overall with the patient medical interview.	5	4	3	2	1

Observed Effective Communication Behaviors

Researcher Instructions: The following questions are based on if the observed communication behavior was "Good", "Fair", or "Poor". Place an "X" on the line that best applies.

	Good	Fair	Poor
8. Athletic training student (ATS) greeted the standardized patient (SP) and introduced themselves.	___	___	___

9. ATS asked the SP what happened. ___ ___ ___

10. ATS asked the SP when the injury occurred. ___ ___ ___

11. ATS asked the SP to explain
or show how the ankle injury occurred. ___ ___ ___

12. ATS asked the SP if they continued
to participate in the activity after the injury. ___ ___ ___

13. ATS asked the SP if they had previous
history of injuring the ankle. ___ ___ ___

14. ATS asked the SP their pain levels. ___ ___ ___

15. ATS asked what the SP has done,
in terms of treatment to the ankle, since the injury. ___ ___ ___

16. ATS palpated the SP's injured ankle
(pushing on different places and asking if it hurt). ___ ___ ___

17. ATS performed range of motion
tests to the SP's injured ankle
(asking if any motions hurt). ___ ___ ___

18. ATS performed special tests
to the SP's injured ankle
(asking which tests hurt). ___ ___ ___

19. ATS was able to favorably adapt their
communication behavior as the situation changes. ___ ___ ___

20. At some point during the medical encounter,
the ATS checked for the SP's understanding
or asked if the SP needed more
explanation/clarification. ___ ___ ___

21. The ATS avoided using medical jargon
or complicated language. ___ ___ ___

22. The ATS used opened- and closed-ended
questions appropriately. ___ ___ ___

23. The ATS actively listened using nonverbal techniques (i.e. eye contact). ___ ___ ___

24. The ATS actively listened by not taking notes when SP was answering questions or explaining the condition. ___ ___ ___

25. ATS allowed the SP to complete their statements and not interrupt. ___ ___ ___

** Items 11 and 23 were removed for the corrected Patient Medical Interview Scale.*